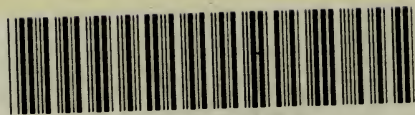


MOTHER AND BABY

SELINA F. FOX
M.D., B.S.

J.&A.CHURCHILL



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MOTHER AND BABY



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"The first thing that meets a child on its entrance here, is the heaven of love in a mother's eye. Whatever it encounters after, here is pure love for the beginning."

J. Brierley.

MOTHER AND BABY

OUTLINES FOR A YOUNG MOTHER
ON THE CARE OF HERSELF AND
HER BABY

BY

SELINA F. FOX, M.D., B.S.

SENIOR PHYSICIAN OF THE BERMONDSEY MEDICAL MISSION FOR WOMEN
AND CHILDREN; LATE HOUSE SURGEON OF THE CLAPHAM MATERNITY
HOSPITAL; LATE ASSISTANT SCHOOL DOCTOR, LONDON COUNTY
COUNCIL; LECTURER ON INFANT CARE, HOME NURSING,
FIRST-AID AND HEALTH TO THE LONDON COUNTY
COUNCIL; RECOGNISED TEACHER OF THE CENTRAL
MIDWIVES' BOARD; AND RECOGNISED DOCTOR
TO H.M. BOARD OF EDUCATION.

WITH 29 ILLUSTRATIONS



LONDON

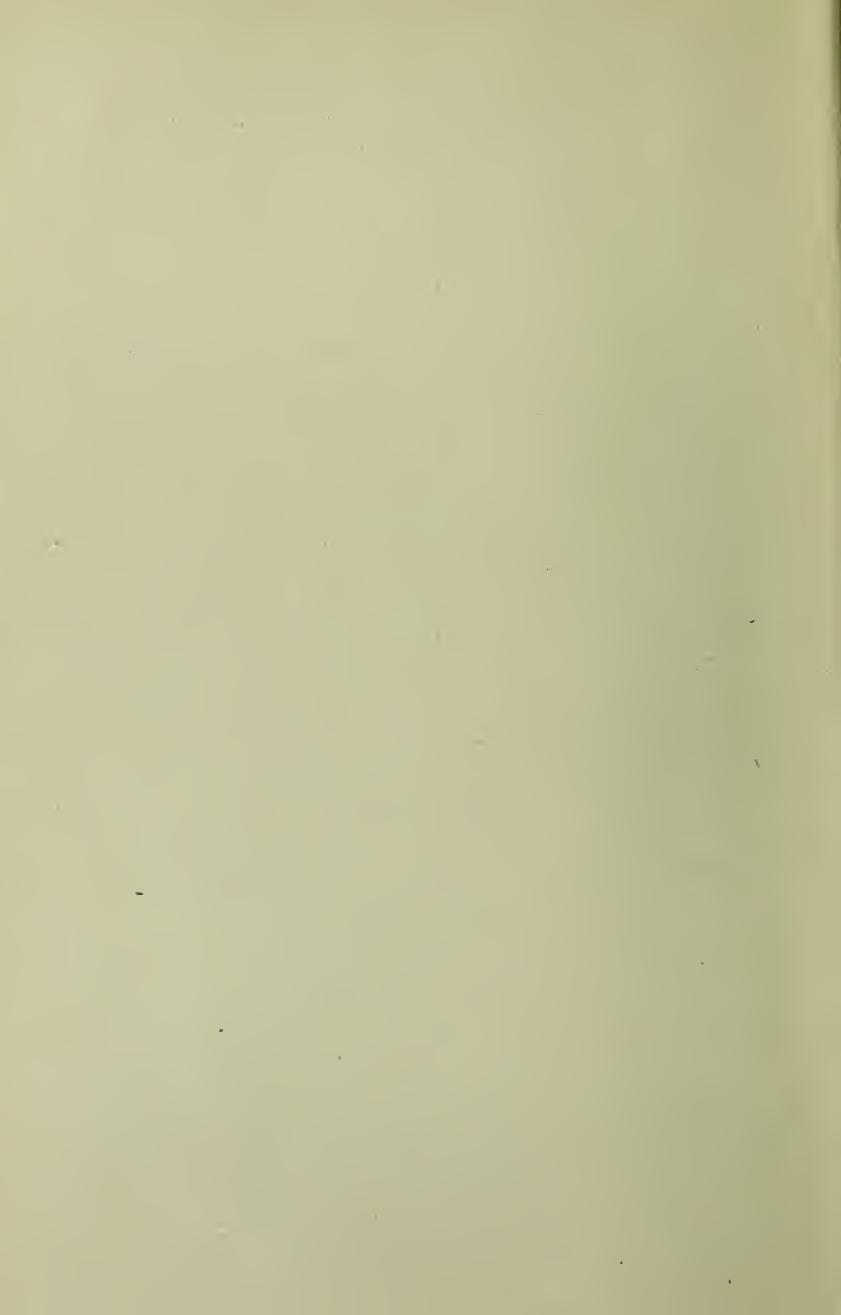
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DEDICATED
TO ALL WHO ARE CALLED TO
THE HIGHEST PRIVILEGE
OF WOMANHOOD



PREFACE

THIS little book is in no way intended to be a treatise on the great subject of Motherhood. It is a simple guide for a young mother to a practical and common-sense management of herself and her child.

It deals in the first place with her own needs in this special condition. An inexperienced woman hardly realises that her love and devotion to the coming child is best shown by an intelligent recognition of the necessity of care for her own well-being, and that this should date from the earliest weeks of pregnancy.

Owing to the education of the present day, it can hardly be expected that the young mother should know how to take care of herself and her baby, and it is therefore hoped that this book of plain outlines and practical methods may be useful.

Secondly, it goes on to the subject of the actual preparations for the baby, its care after birth and during early life, and methods of feeding.

Thirdly, the every-day troubles met with in infancy and childhood are described, together with their treatment; and lastly, a chapter is devoted to emergencies and first-aid in the nursery.

Preface

It is believed in spite of the brevity of these pages that among them young mothers may find help when uncertainties present themselves, and simple advice which may save them anxiety, and the child, perhaps, unnecessary suffering.

S. F. F.

August, 1912.

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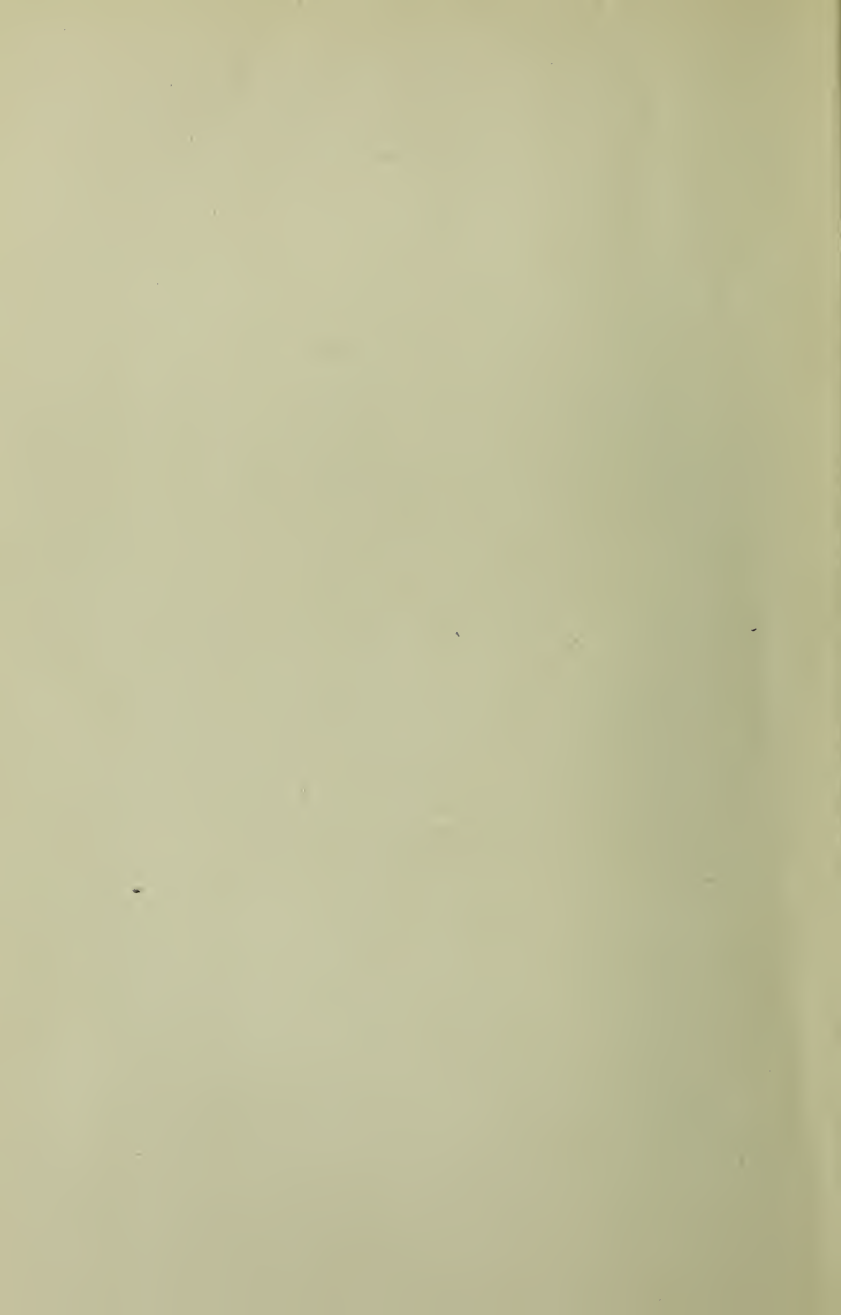
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BABY'S CATECHISM.

Where did you come from, baby dear ?
Out of the everywhere into here.

Where did you get those eyes so blue ?
Out of the sky as I came through.

Where did you get that little tear ?
I found it waiting when I got here.

What makes your cheek like a warm white rose ?
I saw something better than any one knows.

Where did you get this pearly ear ?
God spoke, and it came out to hear.

Where did you get those arms and hands ?
Love made itself into bonds and bands.

How did they all just come to be you ?
God thought about me, and so I grew.

But how did you come to us, you dear ?
God thought about you, and so I am here.

George MacDonala.

MOTHER AND BABY.

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CHAPTER I.

A. The Preparation of the Mother.

“A mother is . . . the holiest thing alive.”

S. T. Coleridge.

Introduction.

Before actually considering the subject of “the first baby” it is essential that this opening chapter should deal with the all-important question of the mother. It must ever be remembered that the best preparation for the coming baby is the care of the mother herself. The nine months of so-called “waiting time” are months of the greatest importance in the life of the little one, and during this period the expectant mother can do more for the living, developing child than perhaps is even now realised. Care of herself then, is of the first importance; it must mean self-sacrifice and self-control, but it must always be borne in mind that the whole period is also to be governed and regulated by the laws of common sense. Pregnancy is a natural, physiological condition, but the tendency nowadays is to regard it as being unnatural, a malady or pathological occurrence, and as a result of these false ideas, wrong lines have been adopted in its management instead of following normal, healthy conditions.

Mother and Baby.

In an already physically sound woman, her well-being should in no way be impaired, only a little extra care must be taken in keeping the bodily functions regular, and in healthy working order. If only the fact could be impressed upon women that pregnancy is an absolutely natural event, more would be done to cure, or prevent mental and nervous states than anything else.

The life of the child begins from the first day of pregnancy, though for the next eight or nine months it is entirely dependent upon union with the mother. At the end of the ninth month, a time and stage is reached in its development when an independent and separate life is capable of being begun and maintained.

1. Pregnancy.

Although it is impossible to deal here fully with the subject of pregnancy, it may be well to give its chief characteristics, so that the mother may be able to recognise her condition.

I. DURATION OF PREGNANCY.—This is usually taken as being 280 days, or nine calendar months, or forty weeks. This can be reckoned in several ways, either by taking the last day of the last monthly period, which is always somewhat uncertain, or by taking the first day of the last period as the time from which the days are to be counted. It is impossible to fix upon the exact date, and it is much safer to expect the confinement to take place in the middle of the week in which the reckoned date falls.

2. The following *obstetric table* will help the calculation :—

The Preparation of the Mother.

OBSTETRIC TABLE

The calculation is made from the first day of the last menstrual period.

January <i>October</i>	1 8	2 9	3 10	4 11	5 12	6 13	7 14	8 15	9 16	10 17	11 18	12 19	13 20	14 21	15 22	16 23	17 24	18 25	19 26	20 27	21 28	22 29	23 30	24 31
February <i>November</i>	1 8	2 9	3 10	4 11	5 12	6 13	7 14	8 15	9 16	10 17	11 18	12 19	13 20	14 21	15 22	16 23	17 24	18 25	19 26	20 27	21 28	22 29	23 30	24 31
March <i>December</i>	1 8	2 9	3 10	4 11	5 12	6 13	7 14	8 15	9 16	10 17	11 18	12 19	13 20	14 21	15 22	16 23	17 24	18 25	19 26	20 27	21 28	22 29	23 30	24 31
April <i>January</i>	1 6	2 7	3 8	4 9	5 10	6 11	7 12	8 13	9 14	10 15	11 16	12 17	13 18	14 19	15 20	16 21	17 22	18 23	19 24	20 25	21 26	22 27	23 28	24 29
May <i>February</i>	1 5	2 6	3 7	4 8	5 9	6 10	7 11	8 12	9 13	10 14	11 15	12 16	13 17	14 18	15 19	16 20	17 21	18 22	19 23	20 24	21 25	22 26	23 27	24 28
June <i>March</i>	1 8	2 9	3 10	4 11	5 12	6 13	7 14	8 15	9 16	10 17	11 18	12 19	13 20	14 21	15 22	16 23	17 24	18 25	19 26	20 27	21 28	22 29	23 30	24 31
July <i>April</i>	1 7	2 8	3 9	4 10	5 11	6 12	7 13	8 14	9 15	10 16	11 17	12 18	13 19	14 20	15 21	16 22	17 23	18 24	19 25	20 26	21 27	22 28	23 29	24 30
August <i>May</i>	1 8	2 9	3 10	4 11	5 12	6 13	7 14	8 15	9 16	10 17	11 18	12 19	13 20	14 21	15 22	16 23	17 24	18 25	19 26	20 27	21 28	22 29	23 30	24 31
September <i>June</i>	1 8	2 9	3 10	4 11	5 12	6 13	7 14	8 15	9 16	10 17	11 18	12 19	13 20	14 21	15 22	16 23	17 24	18 25	19 26	20 27	21 28	22 29	23 30	24 31
October <i>July</i>	1 8	2 9	3 10	4 11	5 12	6 13	7 14	8 15	9 16	10 17	11 18	12 19	13 20	14 21	15 22	16 23	17 24	18 25	19 26	20 27	21 28	22 29	23 30	24 31
November <i>August</i>	1 8	2 9	3 10	4 11	5 12	6 13	7 14	8 15	9 16	10 17	11 18	12 19	13 20	14 21	15 22	16 23	17 24	18 25	19 26	20 27	21 28	22 29	23 30	24 31
December <i>September</i>	1 7	2 8	3 9	4 10	5 11	6 12	7 13	8 14	9 15	10 16	11 17	12 18	13 19	14 20	15 21	16 22	17 23	18 24	19 25	20 26	21 27	22 28	23 29	24 30

From Wellcome's Medical Diary Messrs Burroughs Wellcome & Co

Mother and Baby.

2. Signs of Pregnancy.

There is no one absolutely infallible early sign of pregnancy, though by taking several together the condition may be regarded as certain.

1. Cessation of the monthly periods.
2. Onset of early morning sickness.
3. Enlargement of the breasts with increased size of the superficial veins, and throbbing or shooting pains. After three months, the presence of a watery fluid which may be squeezed out by gentle pressure. The greater prominence and darkening of the nipple. The development of a dark ring or areola around the nipple.

4. Quickening. The mother first consciously feels the movements of the child. It occurs about the end of the fourth month, or practically half-way through the time of pregnancy. A miscarriage after this date is much less liable to take place than before. Quickening may cause faintness or sudden sickness or other sensations in some mothers, though in others it passes quite unnoticed.

5. Gradual but regular increase in the size and hardness of the abdomen, with the unfolding and stretching of the navel.

6. The foetal heart sounds. This is the only sure single sign of pregnancy, the hearing of the heart-beat of the child. This can only be ascertained by the doctor, and not by the mother, but it is proof positive of her condition. The sounds are heard about the end of the fifth month.

The Preparation of the Mother.

3. The Management of Pregnancy.

The ordinary laws of health, diet, sleep, exercise, and regulation of the functions of the body, are the same in "the carrying period" as in ordinary life, the only difference being that a little extra care is needed in maintaining regularity and efficiency.

I. THE MENTAL CONDITION.—The mother should do all she can to maintain a calm, happy, and contented frame of mind during these months, and here comes in the necessity of self-control already mentioned. The anticipation of motherhood is in itself conducive to a happy frame of mind, but this is not enough; cultivation of quietness and calmness in all the actions, emotions and feelings of life is necessary. How aptly the advice given "study to be quiet" fits in with this condition.

On the early surroundings and environment of a child, especially during these first months of its development, depend, to a great extent, its later mental condition and physical well-being. The mother, then, should do all she can to avoid undue excitement, excessive mental and nervous strain, fits of depression or "attacks of the blues," and, as far as possible, causes of fright, anger, and worry.

On the other hand, the occupations and surroundings of the mother should be those which call into play all that is highest, noblest, gentlest, and most beautiful in her character.

2. CLOTHING.—The great point to be borne in mind about the clothing is that it should be easy fitting, besides being as becoming as possible. The ordinary clothing may be worn up to the end of the third

Mother and Baby.

month, provided everything is comfortably loose and that there are no tight bands. The question of wearing corsets is perhaps a vexed one, which can only be answered by the study of each individual case. No rule can be laid down, and hold fast for all. Women who have been accustomed to wear them all their lives would naturally feel uncomfortable, and unnecessarily so, if called upon to discontinue their use altogether. A pair of old corsets with all the bones removed, except the two behind and the usual fastening in front, replaced by hooks and eyes, or buttons and button-holes, will often be found the greatest comfort and support. A style which has much to recommend it is a well-cut "corset bodice," with shoulder-straps, and adjustable laces at the bust and hips. This, although it gives a feeling of support, is perfectly soft and pliable, and can be enlarged as necessity requires. The most important point is that the underskirt can be attached to the bodice, thus relieving the hips of all weight, which is suspended from the shoulders. The "special corsets" so much advertised should be rigorously avoided, as nearly all are designed to "improve the figure," which can only be done at the expense of both mother and child.

A binder, or supporting abdominal belt, may be used with comfort, but this must never be tightly laced.

Loose blouses are far more suitable than a fitting bodice, for they prevent any undue and harmful pressure upon the breasts.

The skirt of the dress should be made with great care, so as to enable it to hang evenly back and

The Preparation of the Mother.

front, and in such a way that it can be let out and lengthened according to necessity.

A long nicely-fitting coat may be used for out-of-door wear, and should be loose across the chest, and capable of being made wider as required.

The Underclothing.—This may be similar to that always worn. So much is written about special underclothing and dress being necessary and essential, that the expectant mother naturally becomes bewildered, and wonders what should be done. Again, if only it can be remembered that no radical change is needed, but that the clothing to which she has been accustomed may be still worn with slight alterations, an endless amount of perplexity and worry will be saved. Comfort and freedom from pressure, is all that is really required, and this can easily be attained without recourse to fancy fads and expense, so often advocated. Shoes and boots should be easy fitting and stockings ample, for often, especially during the last months of pregnancy, the feet and legs become swollen owing to pressure on the veins in the pelvic cavity, caused by the increasing size of the contents of the uterus (womb).

The result of this pressure is to impede the blood flow from the feet and legs to the heart, and this not infrequently causes stretching of the walls of the veins, loss of their elasticity, with subsequent enlargement of the vessels, and the formation of a condition known as varicose veins.

Garters should never be worn at any time, much less by a pregnant woman; their place can be efficiently taken by suspenders attached to a separate band, or to the corsets if more comfortable. These

Mother and Baby.

produce no constriction or pressure on the legs, and therefore none on the veins.

3. DIET.—The diet should be almost the same as the ordinary one. It should not be in excess of that usually taken or different in character, except that it should be composed of specially nourishing, light, and digestible foods. Butcher's meat should be taken only once a day, and if possible at midday rather than at night.

Bread, either brown or whole-meal, is good, or standard bread made from some reliable flour such as Stan-myl'n or Verold. The white anæmic bread should be avoided, as it contains very little else than starch, and is deficient in other ingredients so beneficial to the mother. Vegetables are necessary and should be eaten every day, more especially the green variety. Potatoes, however, should be taken sparingly, for they contain a large amount of starch, which is liable to produce indigestion.

No hard-and-fast rule, however, can possibly be laid down. The exercise of common sense and discretion will do more than any lists of prescribed diets, so long as it is borne in mind that the most nourishing food is required, without an undue strain being thrown upon the digestive organs.

Fluids.—It is better to drink between, rather than at, meal-times. Tea, if it does not cause indigestion, may be taken in moderation; the early morning cup, if enjoyed, may still be allowed, especially if it is found to relieve any feeling of sickness or nausea. Tea and coffee should be avoided at night if they tend to impair rest and sleep; but here again, some can take either, without any ill effects.

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With regard to the use of alcohol, it is perhaps impossible to speak too strongly. It has been proved so conclusively that this drug, even in minute doses, acts as a direct poison to the developing child through the mother's blood, that it is not possible to come to any other conclusion than that it ought to be strenuously avoided in all its forms, even in its weakest preparations.

4. EXERCISE.—Exercise during pregnancy is of the utmost importance, but it should never be excessive or lead to over-fatigue. A lazy, indolent life at this time is harmful to the mother in many ways. First, the digestion is impaired, attacks of flatulence and even nausea and vomiting are liable to result, and constipation with all its attendant ills. Second, lack of exercise lessens the function of respiration, the blood becomes insufficiently aërated, oxygen is not adequately carried to the tissues, and the waste product, carbonic acid gas (CO_2), is not properly eliminated from the body. Third, the muscles for want of systematic exercise, lose their “tone” and become flabby, and are not in a fit condition to do hard work. During labour the muscles have a great strain thrown upon them, and unless kept up to the mark, and in a healthy, firm condition, a great deal of extra trouble and delay is apt to take place at the time of the confinement. Of all exercises walking is by far the best; an hour morning and afternoon should be thus employed, though during the later months it may perhaps not be possible to continue this for so long a time. Hard exertion, such as hockey, tennis, bicycling, riding, etc., should be

Mother and Baby.

avoided. All undue strain caused by the moving and lifting of furniture, reaching upwards for the purposes of curtain or picture hanging, must be left to others. How often a miscarriage has been brought on by one of these actions, caused by the anxiety of the mother to have her house spring-cleaned and tidy before the expected event! Great care should thus be exercised, especially up to the third or fourth month of pregnancy, and also during the last three months of her time.

Driving or motoring in moderation is a useful addition to the exercise of walking; it enables the mother to have the fresh air without effort. Special care should be taken about travelling or undergoing any extra exertion or fatigue at what would have been the ordinary monthly periods, as it is at these times that a miscarriage is more likely to occur. Sea voyages, if sea-sickness is produced, must not be undertaken, though, of course, it is not always possible to avoid them.

To sum up what has been said on the subject, "All exercise should be regular, but never excessive."

5. FRESH AIR.—Although fresh air by means of exercise is essential, the importance of it in dwelling and sleeping rooms cannot be over-estimated. Fresh air in abundance is a vital necessity. The developing child does not yet breathe independently of its mother, and this fact makes it necessary for her to breathe for two. The oxygen is carried to the child by the mother's blood through the circulation, hence the importance of her breathing pure air constantly.

Ill-ventilated, over-crowded rooms, hot, stuffy

The Preparation of the Mother.

theatres and concert halls should be, at least for this period, avoided. This does not mean that the mother should stand aloof from all simple social amusements and gatherings, or from the mixing with friends in their own homes. Taking interest in others and their doings, and following as closely as possible her ordinary pursuits of life, is of great importance; the vitiated air of close rooms is what must be shunned. Attacks of shortness of breath, gasping, and even faintness frequently follow the want of an abundant supply of fresh air. At night the windows of the bedroom should always be open; the register of the fireplace must never be shut, as the chimney flue is one of the best ventilating shafts possible. Sleeping in a draught, however, should be deprecated, but this can usually be prevented by keeping the door closed. The idea that there is something absolutely harmful in "the night air" is long exploded; it is the night air of close bedrooms which is so bad, and this more than anything else is the cause of morning headache, the feeling of being good for nothing until after breakfast with its stimulating cup of tea or coffee.

6. REST AND SLEEP. — Unbroken nights are essential to the mother, and a rest at midday after luncheon is often a great boon. This break in the day not only alters the position of the body, and so rests the muscles of the back and legs, but also tends to refresh and compose the whole nervous system. A little rest, away from the usual daily duties and constant calls on her time, is often an untold help. It should, however, be regularly taken and jealously guarded, even if it be only for thirty or forty minutes.

Mother and Baby.

Towards the later months of pregnancy it is more restful to lie with the head and shoulders fairly high ; this often eases the breathing and gives a feeling of general comfort. Difficulty or strain in breathing is nearly always present, and must not be looked upon as anything serious ; nor should it produce any anxiety in the mind of the mother that anything is seriously wrong with her heart. It is caused by the increasing size of the growing child producing an upward pressure upon the large muscle of respiration separating the chest from the abdomen, which is called the diaphragm. This pressure prevents the lungs from working freely, and it also exerts an influence upon the heart, so that its action is slightly embarrassed. The two together produce this difficulty in breathing, which is alleviated when in bed, by lying with the head and shoulders raised. During the last two weeks of her time this feeling will be greatly relieved owing to the fact that the whole contents of the uterus sink lower into the pelvic cavity. This sense of ease and comparative well-being may be taken as one of the earliest signs that labour will not long be delayed, and that her full time is nearly reached.

7. BATHS.—If a bath in the morning has always been the rule of the mother's life, it may certainly be continued, but the water should not be so cold as to produce a shock on getting in. If this has not been the regular routine, it should now be instituted. The parts at night should always be washed with warm water. A great deal may be done to assist the mother at the time of labour by the careful use of baths during the last three months. During this

The Preparation of the Mother.

period a hip or sitz bath should be taken every night before going to bed. She should sit in the water for fifteen or twenty minutes, the shoulders and chest being warmly covered in a blanket. The temperature of the water must be kept about 100° F. all the time; a bath thermometer always being used, for it is so easy to get the water much too hot if left to guess-work or to sensation. This regular nightly soaking tends to soften the skin and all the tissues, making them pliable and elastic, which at the time of delivery is of the greatest help and benefit.

The practice of giving douches should never be adopted; it is one of the frequent causes of miscarriage and disappointment, and must not be employed except by medical advice, and then should be given under supervision. All the benefits to be derived from the softening of the tissues can be gained much more surely by the systematic use of the bath as described, than by the employment of the douche, with all its attendant dangers and drawbacks.

8. REGULATION OF THE BOWELS.—Too much stress cannot be laid on the importance of this function. The bowels should be relieved regularly and easily at least once a day without straining, and the motion should be natural in amount, and soft in consistency. Great care is often needed to ensure this, and *before drugs are resorted to* every means must be used to overcome a tendency to constipation. A little care in the regulation of the diet, the addition of simple laxative foods to the meals, or the giving up of others which might tend to constipation, may overcome the trouble. In some cases

Mother and Baby.

porridge, especially made from the genuine oat-meal, may be of service. In others extra fat, such as butter, cream or salad oil, with the vegetables may be enough. A good cup of coffee at breakfast, or the taking of stewed fruit or a baked apple before the meal or at luncheon may produce the desired effect. Care with the diet, together with a little extra exercise during the day, is often enough to save the use of more drastic remedies.

Constipation is frequently due to the want of a greater amount of fluid taken between meals. Plain drinking water is often the remedy for cases of a seemingly tiresome and obstinate nature.

Should the bowels not be relieved in twenty-four hours some simple aperient must be taken. It cannot be impressed too strongly upon all mothers that drastic purgatives and "opening medicines," purchased without any knowledge of what they contain, are dangerous, and should never be employed. There is nothing so sure to cause a miscarriage as the taking of these drugs. A lukewarm soap-and-water enema very carefully and cautiously injected by means of a Higginson's syringe may be first employed. This should be given lying down. Usually a soft motion will result without any chance of producing a miscarriage.

A teaspoonful of Epsom salts in the morning, or a larger dose of Eno's fruit salt or effervescing magnesia taken before breakfast, may be of service. Liquorice powder at night, followed by a cup of hot weak tea in the morning, is often successful.

Cascara "Tabloids," gr. v., every night and morning may be of service. If it is found that any one of

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these drugs produce pain or griping, it should not be taken again, but another tried in its place. It is not advisable to take castor oil, for although the bowels are relieved, there is the drawback of the after-constipating effect of the drug. The constipation thus produced may be more obstinate than that for which the oil had been administered.

If constipation and straining persist, further delay should not be allowed to continue, but medical advice must be sought, as there may be something pressing upon the lower bowel, which unless rectified would never permit an action, however strong might be the remedy employed. A miscarriage may be easily produced by the discomfort and straining needed to relieve the bowels.

2 9. THE ACTION OF THE KIDNEYS.—It is not necessary to dwell much upon this all-important subject, except to point out one or two facts which must be carefully watched. The subject of the passing of the urine (water) is so important that if anything is wrong there must be no hesitation at all in calling in the medical attendant at once. Specimens of the urine should be sent in regularly once a fortnight for examination, especially during the latter months of pregnancy.

Should the mother, however, find that the quantity is lessened, or that she has peculiar dizzy attacks with a sense of weight and oppression over the eyes, and a headache which is more or less constant, no time should be lost in informing the doctor.

Sometimes, too, the feet and legs above the ankles become swollen. This is readily shown by the indentation produced by the shoe-straps, lace of the

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boots or pressure of the fingers. The eyelids may also become puffy; this is specially noticeable on waking in the morning.

Neither of these conditions should ever be concealed, but should be immediately reported, for it may mean that something serious is wrong. This, if seen to at once, can often be relieved, but, if neglected, may lead to one of the most fatal complications of pregnancy.

The Method of Taking a Specimen.—This is very simple. The urine at night should be passed into a perfectly clean chamber, which should then be covered. In the morning or during the night if necessary, the same chamber should be used, so that the urine becomes freely mixed. A well-rinsed medicine bottle should then be filled, corked, and carefully labelled with the name and date. This little precaution should always be taken, for it prevents all chance of mistakes by the doctor, who may have several such specimens awaiting examination.

The urine during pregnancy has frequently a peculiar scum with iridescent colours which forms on the surface, giving it an unnatural, thick appearance. This is nearly always present; it has no very important significance, and need not lead to any anxiety as to the possibility of grave trouble supervening.

10. THE BREASTS.—During the whole time of pregnancy the breasts gradually increase in size. The nipples become more prominent and a dark circle around them develops, which is called the areola. The veins also become more visible under the skin, and the whole organ develops in preparation for its function of producing milk. At the end

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of the third month a little watery fluid can be expressed by gentle pressure, but the true milk is not secreted until the third day after the birth of the child. It is of great importance both to the mother and baby to take steps early for the careful development and preparation of the nipples. A little care will prevent them from becoming cracked or sore later, a condition which frequently leads to inflammation and the formation of an abscess in the breast. During the last three or four months the nipples should be gently drawn out and carefully rolled between the finger and thumb. This should be done every night and morning. In the morning after the bath each nipple should be bathed with a little spirit, such as Eau de Cologne, spirits of wine, or brandy, mixed with an equal amount of water, then thoroughly dried with a soft towel. The object of this treatment is to harden the skin and make the nipple more prominent.

It is difficult to over-estimate the supreme importance that attaches to the breast-feeding of the infant; hence no pains should be spared in doing all that is possible to make this easy. The mother's milk is the natural food for a baby; no cow's milk, however treated and changed it may be, can ever bear any comparison either to the nutritive value or digestive properties of this natural food. A woman who *refuses* to nurse her child is unworthy of the great trust and responsibility that are given to her in the birth of the little one. This supreme duty and privilege of motherhood can only be neglected with untold loss both to her moral well-being and happiness, and with incalculable detriment to the child.

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This is a brief summary and description of the care necessary for the satisfactory preparation of the mother for the great event of her life ; and although short, it may perhaps give some idea of the need there is for common sense and forethought in the privilege and responsibility awaiting her.

4. The Common Disorders of Pregnancy.

These cannot be dealt with at any length, though the more common ones may be mentioned.

I. VARICOSE VEINS.—The veins are frequently distended owing to the pressure in the pelvic cavity impeding the blood flow. These veins are specially noticeable in the legs and feet, and produce a swollen and painful condition. The enlargement of the veins will to a very great extent disappear after the birth of the child, and little can be done until then, except by the use of remedies to relieve any pain or discomfort that may arise. Standing about should be as much as possible avoided, and the feet kept up on a chair when the legs become heavy or painful. A firm, well-fitting bandage applied from the base of the toes upwards to the knee, or even above, will often give great relief. An elastic stocking may sometimes be preferred ; but these are not to be advocated in every case, as the pressure exerted by them frequently produces discomfort and irritation. If there is troublesome itching of the skin, a simple remedy which gives great relief is liquor carbonis detergens, one of Wright's coal-tar preparations. This should be mixed with a little water, or used pure, and dabbed on to the skin with a clean piece of linen or absorbent cotton-wool.

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Occasionally a varicose vein when very distended, if knocked or injured, may burst, and hæmorrhage for a moment or so be profuse. There need not be, however, any danger from this if the simple method of raising the leg high above the hip be employed, and pressure applied at once to *the bleeding spot*. This will be sufficient to stop the bleeding, and then a fresh pad may be firmly placed and kept in position by a well-adjusted bandage. Rest for a few days will be all that is necessary.

2. PILES.—Piles are the same condition of varicose veins, only in a different position. The veins of the rectum and around the anus (the lower part and opening of the bowel) become enlarged from pressure. This often produces a good deal of discomfort, but again will be relieved after the delivery of the child. Great care in the regulation of the bowels is absolutely essential. The motions should never be allowed to become hard, and all straining should be avoided. If any tight clothing is being worn it should immediately be discarded, for it decreases the space necessary for the growing child, and the pressure downwards becomes so great that both varicose veins in the legs and piles are greatly increased. After every motion the part should be carefully washed with a little warm water, and if the piles have “come down” they should be carefully pushed back with two fingers. Should there be some slight bleeding from them, a little gall and opium ointment smeared on will often give relief. Any irritation is quickly allayed by dabbing the part with cotton-wool dipped in hazeline.

3. MORNING SICKNESS.—This frequently begins

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directly the woman has become pregnant, and lasts usually three months. It may be so slight as to produce only a feeling of nausea ; on the other hand, it may be so severe as to need medical advice. If troublesome, it is wise for the mother to stay in bed until she has at least had a cup of tea, or, if necessary, until after breakfast. Sickness not infrequently leads to a miscarriage ; hence the importance of doing everything possible to overcome it. Careful regulation of the diet, fresh air in the bedroom at night, food before getting up, and free action of the bowels, are all simple but important facts to be considered in dealing with this trouble.

4. "THE WHITES," OR LEUCORRHŒA.—Some women are greatly troubled with this discharge from the vagina (or front passage). It is produced by pressure causing irritation of the lining membrane of the passage. It may be slight or excessive. Care must be taken to keep up the general health. The diet must be carefully regulated and the action of the bowels increased. As much rest as possible in the recumbent position relieves the pressure, and consequently the discharge is lessened. The parts should be thoroughly washed night and morning, and it may be necessary to give a douche every night. This, however, must never be done without medical advice.

5. MISCARRIAGE.—The expulsion of the child before the full time is, broadly speaking, termed a miscarriage. If it occurs before the end of the seventh month it is often called a miscarriage or abortion ; the child cannot live under ordinary circumstances independently of its mother, and dies before, during, or immediately after birth. Since,

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however, the introduction of the incubator, a few isolated cases of premature infants have been reared, but these must be, at present, regarded as the exception and certainly not the rule. After the seventh month it is called a premature labour, and the child can sometimes be reared naturally with great care.

At whatever period it may occur it is always a serious condition for the mother, especially during the earlier months, for the simple reason that it is looked upon as only a slight accident, and is often neglected and treated improperly. Consequently this results in illness and suffering for many months afterwards. If the accident occurs later on, then the danger is not so great, for the mother is kept in bed and treated as though it had been an ordinary labour.

Great care should be taken to prevent a miscarriage occurring, for one may lead to a series, and the habit to miscarry may be developed.

Causes.—Separation of the developing child (ovum) in the uterus from the mother is *the* cause. This may be brought about by many things, such as over-exertion, physical strain and fatigue from lifting heavy weights, etc.; accidents and falls, strong emotion, fright, temper, violent purgatives, troublesome constipation with consequent straining.

Symptoms.—The feeling of tiredness and general uneasiness, depression, sensation as of the onset of a monthly period, pain and aches in the lower part of the back and abdomen, a slight “show” of blood in the discharge from the vagina, which may develop and become a “flooding,”—are one and all danger signs.

Preventive Treatment.—All due care must be taken

Mother and Baby.

to prevent over-fatigue, physical strain, and mental excitement, especially during the first and last three months of pregnancy.

Actual Treatment.—Immediate rest in bed, and medical advice should at once be sought.

B. Other Preparations.

1. Selection of the Room.

The room is usually that which the mother has always occupied, and there is no reason why another should be selected, provided it has the following necessary requirements. It should be quiet, and if possible away from the ordinary living rooms. It is preferable to have it upstairs, though owing to the modern mode of life in flats this may be impossible. It should, if it can be arranged, communicate with another room, so that the nurse may occupy this, and yet be in close touch with the mother without actually being in her room.

The room should have the morning sun rather than that of the afternoon, and a bright outlook is always helpful. The window or windows should open freely; sash-frames are preferable to those that open outwards, or French casement windows. Ventilation is much more difficult with these two latter varieties, especially when the weather is wet or cold. An open fireplace is essential, not merely from the point of view of being able to have a fire, but also because it is a valuable aid to good ventilation. The register of the chimney, which is nearly always found in the old-fashioned fireplaces, must be kept open, and should never be allowed to be closed.

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2. Preparation of the Room.

A few days before the expected event the room should be thoroughly cleaned out, but none of the heavy work must be done by the mother. The furniture should be moved, and the backs and tops of each piece carefully cleaned and dusted with a damp cloth; carpets taken up and beaten, or where this cannot be done, well swept. The paint throughout the room should be washed, the pictures taken down, their backs all scrupulously dusted and the glasses polished. Fresh curtains should be put up, and the gas or electric light brackets dusted and globes washed; in fact, the whole room should have an air of freshness and beauty.

There is no need to dismantle the room or to remove the carpet, provided everything has been thoroughly cleaned beforehand. One great advantage to the room is the presence of dark green roller blinds; they are quiet in their working, they produce a subdued, peaceful light, and are far less expensive than any other variety.

A coal-box or scuttle filled with fairly large lumps of coal and provided with an old glove is a great help, for the fire can be mended noiselessly, while the rest and sleep of the mother is undisturbed. The bed should be a single one if possible, as it is then much easier to attend properly to the needs of the mother without any undue stretching or strain on the part of the nurse. There should be no curtains or valance, as a free current of air should be able to circulate all round and under the bed. A screen can be placed as required either to shield the draught

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from the door and open window, or to shade the light from the eyes.

The mattress should be of hair, the sheets twill or cotton, not linen, the pillow-case of linen, and two warm blankets of light weight. It is well to provide a large sheet of mackintosh over the mattress under the bottom sheet. A draw-sheet is of great importance. This should never be so long that when soiled it can be drawn partially from under the patient and rolled up, the soiled part being tucked under the mattress. When a draw-sheet has done its work once, it should be removed and never used again until washed. A fresh one should be put in its place by carefully moving the patient over on to her side, and then rolling her back on to the clean sheet. The old-fashioned way of having a long draw-sheet, and tucking it in as it became soiled, cannot be too strongly condemned, as positively insanitary and dangerous. A coverlet of light weight, but not a heavy cotton counterpane, completes the bed clothing.

Another little addition to the room will be found of great value: a spirit lamp with saucepan and kettle on a tray, for night use.

A night light well shaded is often a great comfort, and may help the mother to sleep. If a woman has been accustomed to this it should never be prohibited on the plea that the light will keep her awake. On the contrary, enforced darkness will often lead to a restless night.

3. The Actual Necessaries for the Confinement.

These articles may be enumerated thus:—

A pretty, warm dressing or bed jacket.

The Preparation of the Mother.

A shawl, light in weight but warm in texture.

A flannel dressing-gown and bedroom slippers.

Knitted bed socks, especially in winter-time.

Long flannelette stockings, just for use during the confinement, are useful and comfortable; they keep

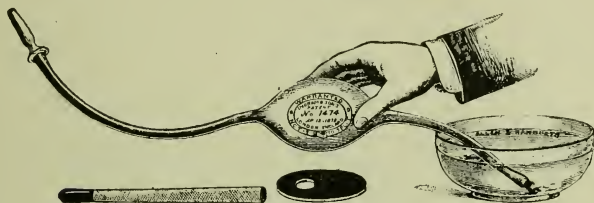


FIG. 1.—Enema Syringe.

the patient warm, the legs and thighs well covered, and prevent any undue exposure during labour. They can be very simply made, and are kept up by a tape run into the top, and tied around the thighs.

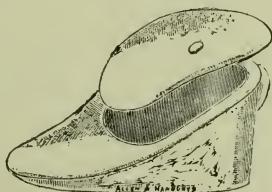


FIG. 2.—Bed-pan, slipper shape, of white porcelain.

Hot-water bottle, preferably of indiarubber.

Two pieces of mackintosh sheeting, 1 yard in width; one should be about 2 yards and the other 1 yard in length.

Higginson's enema syringe. (Fig. 1.)

Bed-pan. (Fig. 2.)

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Douche can with glass nozzle, and new tubing.
The nozzle should have no hole at the end, but
several around the edge. (Figs. 3 and 4.)

A feeding cup.

A graduated medicine glass in leather case. (Fig. 5.)

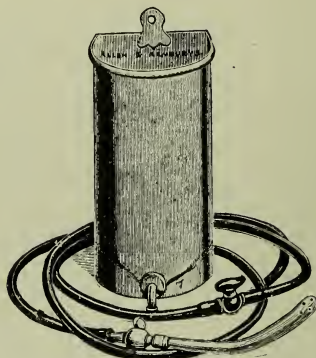


FIG. 3.—Douche Reservoir.

A bottle of Eau de Cologne.

Three lengths of round towelling about $1\frac{1}{4}$ yards
long, and 18 inches broad, for binders.

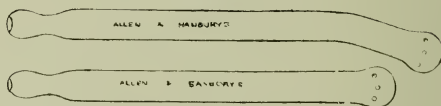


FIG. 4.—Glass Douche Nozzles.

Two 1-lb. packets of absorbent cotton-wool.

Thirty-six yards of single width butter muslin; this
enables the sanitary pads to be made as required.
They somewhat resemble the pattern of the sanitary
towels obtainable everywhere, but they have the

The Preparation of the Mother.

great advantage that they are capable of being made of any size to suit individual needs, besides being much less expensive.

One small packet of plain sterilised gauze.

One ounce of boracic acid crystals.

One ounce of dry boracic powder.

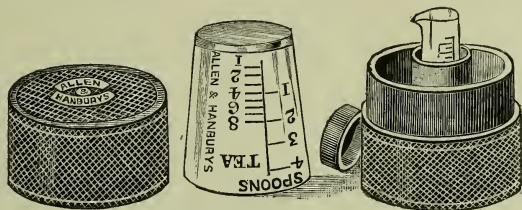


FIG. 5.—Medicine Glasses in Case.

One box of large steel safety pins for fastening the binder.

One skein of strong white linen thread.

One pot of fresh vaseline or lanoline.

One dozen or more little pieces of soft linen rag, each about 2 inches square, ready cut for use; these when once used must be burnt.

CHAPTER II.

PREPARATIONS FOR THE BABY.

Introduction.

i. *Clothing and Outfit.*

1. CHARACTERISTICS OF GOOD CLOTHING.
2. BABY'S FIRST CLOTHING.
In-door. Night wear. Out-of-door.
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 - c. Sunny.
2. ARTIFICIAL LIGHTING.
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4. WALLS AND WALL PAPERS.
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9. VENTILATION.

vi. *Six Rules of the Nursery.*

vii. *Baby's Perambulator.*

CHAPTER II.

Preparations for the Baby.

“ Hush, my dear, lie still and slumber,
Holy angels guard thy bed !
Heavenly blessings without number
Gently falling on thy head.

“ Sleep, my babe ; thy food and raiment,
House and home thy friends provide ;
All without thy care or payment,
All thy wants are well supplied.

“ How much better thou’rt attended
Than the Son of God could be,
When from heaven He descended,
And became a Child like thee !

“ Mayst thou live to know and fear Him,
Trust and love Him all thy days ;
Then go dwell for ever near Him,
See His face, and sing His praise.

“ I could give thee thousand kisses,
Hoping what I most desire ;
Not a mother’s fondest wishes
Can to greater joys aspire.”

John Byrom.

Introduction.

The nine months of waiting cannot be better spent than in devoting time and thought to the needs of the coming little one.

The thoughts of love and tenderness, of care and devotion, of the possibilities that are stored up in the

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wee mite cannot be intruded upon. These are the possession and right of the expectant mother, and should be sacredly guarded as such; but the more practical preparation must now be, as far as possible, considered.

1. The Clothing and Outfit.

To those to whom money is a consideration, it is a comfort to know that the expensive layettes provided by shops at very high prices contain much that is unnecessary in the outfit for the little one. Much money is spent in buying things that are useless, and surely nothing can come up to the home-made, well-thought-out, love-stitched little wardrobe. The mother's own taste in the matter should in every case predominate, although many gifts from friends and relations will, naturally, add to, and to a certain extent modify, the mother's scheme.

In making clothing certain principles and needs must always be remembered; if not, baby will be dressed in clothing made from materials which are unsuitable, and designed on wrong lines. Clothing is used:—

1. To keep the body warm.
2. To help the skin to maintain an even temperature.
3. To allow evaporation.

If this evaporation takes place too quickly there will be a sensation of chilliness; if, on the other hand it is too slow, the clothing will become moist clammy and uncomfortable. Both conditions may, and often do, lead to the child taking a chill.

Preparations for the Baby.

Characteristics of Good Clothing.

(a) Clothing must be light but warm.

Woven or knitted garments will fulfil this requirement. Heavy clothing is bad because it tires the child, and at night restlessness and dreaming are frequently produced by heavy coverings, which cause a sense of weight and discomfort, without supplying the needed warmth.

(b) Clothing should be a bad conductor of heat.

It must keep in the body-warmth, especially in winter.

(c) Clothing should be porous, so as to enable evaporation to take place from the skin.

(d) Clothing must be loose, so as to allow full play and movement of all the muscles of the body.

(e) Clothing should be simple. Simplicity should govern the choice and direct the mother's busy fingers.

(f) Clothing should also be pretty and pleasing.

(g) Clothing should cover all the vital parts of the body, including the neck, armpits, the arms as far as the wrists, the chest and abdomen, the thighs, legs, and feet.

The common danger is to overburden a baby while in long clothes, and to expose the extremities when shortened.

BABY'S FIRST CLOTHES.--In making baby's long clothes it should be borne in mind that warmth is essential, coupled with light weight, together with allowance for free movement.

A baby's skin is very delicate, and cannot stand

Mother and Baby.

any material that is rough or prickly, so that the one selected should be soft and pliable, and at the same time give the necessary ventilation to the skin. Flannel or knitted garments are best.

In some of the poorer homes flannelette is frequently selected because of its smooth texture, its feeling of warmth, and small cost. If this cotton material is used, it must be remembered that it is very inflammable and therefore highly dangerous to the child. "Non-flam," which is a variety of flannelette, should, if possible, be purchased. If this is not employed then the ordinary flannelette garment should be soaked in alum and water after being washed, and allowed to dry without being further rinsed.

The following is a list of the clothing that should be prepared:—

FOR DAY WEAR.

Flannel binder for use during two months, followed by a knitted band or belt.

Knitted vest.

Diapers and pilch.

Flannel petticoat and bodice all in one.

Nainsook petticoat.

Morning gown. To be made from a yoke with long sleeves and high neck.

Afternoon robe or dress robe, also made from a yoke with long sleeves and high neck.

Head flannel.

Woollen jacket for cold weather over the little dress.

Knitted socks.

Preparations for the Baby.

NIGHT WEAR.

Knitted vest.

Binder.

Diaper.

Woollen nightgown.

FOR OUT-OF-DOOR WEAR.

Woollen hood.

Large white shawl.

Square of gauze for windy days.

The Binder has been much condemned of recent years, but it has its advantages, and if properly and carefully put on ought to be a comfort and a help to the baby. It should not be worn, however, after two months, its place then being taken by a knitted band or belt.

The Diapers must not be cut too large; they then become bulky and the child's legs are obliged to assume an unnatural and consequently uncomfortable position.

The Afternoon Robes must be light in weight, and not too long or heavily embroidered. The weight of the long gown hanging from the end of the child's feet is often very considerable and leads to discomfort and fretfulness, besides hindering free movement of the limbs.

When a child is taken out of doors, the face during the first outings should be covered with a light square of gauze or chiffon. This should, however, be very shortly given up, and then only used on windy or dusty days. Anything so thick as a handkerchief or Shetland veil should be avoided; fresh

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air, and a free circulation around the face is absolutely essential to the child.

CLOTHING AFTER SHORTENING. BABY'S SECOND CLOTHES. — Shortening of baby should not take place until the end of the fourth month at least ; the modern craze to short-coat a child after three weeks has nothing to recommend it, and, on the other hand, has much to condemn it. Warmth is of such vital importance to a young child that nothing should be done to risk the lessening of this by shortening the garments. In preparing the second clothes, it must be remembered that the movements of the child will be much stronger and more frequent than in earlier life, so that provision must be made to have all the little petticoats and frocks loose and ample.

FOR DAY WEAR.

Knitted or woven belt.

Knitted or woven vest.

Diaper.

Flannel drawers.

Flannel petticoat.

Little white petticoat.

Short dress, down to the feet.

Woollen jacket, with long sleeves and high neck for cold weather.

Socks.

Shawl or head flannel, only to be worn in the passages.

NIGHT WEAR.

Knitted vest.

Knitted belt.

Diaper.

Woollen nightgown.

Preparations for the Baby.

FOR OUT-OF-DOOR WEAR.

Overalls—*i.e.*, knitted socks, leggings, and drawers, all in one.

Pelisse, or a little later a warm light coat.

2. Baby's Basket and Contents.

Perhaps there is nothing in the child's outfit that is shown off by the mother with greater pride than the baby's basket, with its pretty lining, bows and trimmings. No baby's outfit is complete without a basket, and it should contain everything that can be wanted by the little one for weeks to come.

The Basket (Fig. 6) should be either round or square, standing upon four legs, with an undershelf which is of great service to the nurse when dressing or undressing the child, or it may be more like a hamper having a closed lid (Fig. 7), and inside a tray which can be lifted out. The choice must be left to the individual taste. The basket should be neatly lined, with as few niches and crevices to catch dust as possible, and have three or four good-sized pockets besides a sensible pin-cushion attached to the side.

One pocket should contain needles, scissors, thimble, a reel of white cotton, a card of white mending wool, and a good selection of steel safety



FIG. 6.—Baby's Basket.

Mother and Baby.

pins; while a second is useful for the powder box and powder puff.

A good *Dusting Powder* should be obtained; an excellent one may be ordered from the chemist, made of one part of boracic powder and three parts of starch, scented slightly with violets. Another powder which may be used either for dusting, or for drying the cord during the first week after birth, is made of

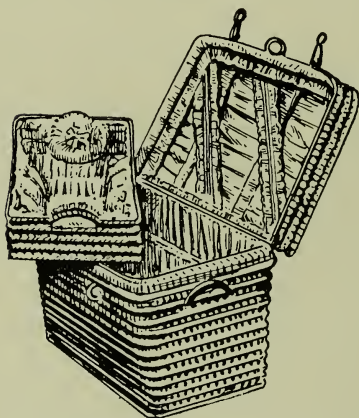


FIG. 7.—Baby's Basket with Lid.

one part of zinc oxide, two parts of boracic powder, and three parts of starch. Fuller's earth is not to be advised; it is often gritty, which causes irritation and chafing of the skin.

A *Tube of Lanoline* should be provided, and a small pot of pure unscented *vaseline*. The basket should also contain a fine soft hair brush and comb. Besides these more ordinary requisites, a roll of antiseptic gauze is necessary for dressing the cord, also a box of pure boracic powder specially kept for this purpose, and a piece of soft old linen, which may be used either for the cord or for cleansing the eyes.

A complete set of well-aired underclothings should be ready, and an old soft blanket or square of flannel in which the baby is to be wrapped directly after its birth.

Another useful item is a carefully ruled book, into

Preparations for the Baby.

which baby's weekly weighings and other special notes can be accurately entered.

Two soft towels and a warm white shawl complete the contents of the basket. This list, of course, may be added to, but it should not be curtailed, as the necessities only have been included.

3. Baby's Bassinette and Furnishings.

A baby should, if possible, possess a bassinette (Fig. 8) for use at night, and a basket cradle which can easily be carried from room to room. Both the bassinette and cradle should be daintily and simply trimmed, so that they match the baby's basket in colour and design. An excellent baby's cradle can be made out of an ordinary washing basket, or a Japanese travelling hamper. When necessity has to be "the mother of invention" an empty banana crate makes a good substitute. The child

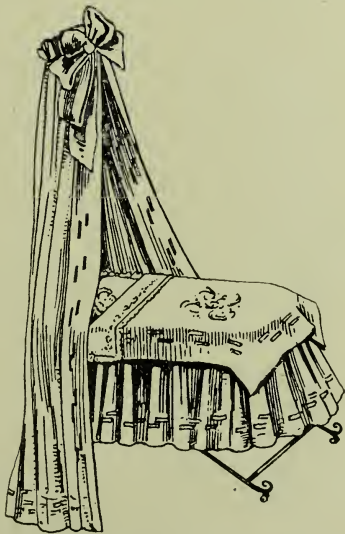


FIG. 8.—Baby's Bassinette.

should never be allowed to sleep in the mother's bed; there is always the temptation for her to feed it at irregular intervals, and also the danger of its being overlaid and suffocated.

Mother and Baby.

The cot may be fitted with simple curtains to form a hood, but these should not be too extensive or full, for the only thing from which the baby has to be shielded is draught, not fresh air.

A *Hair Mattress* should always be used: this is much more hygienic and cleaner in every way than wool.

The *Sheets* should be soft twill or cotton, not linen, as this is too cold for an infant. Two cot *blankets* and a simple coverlet, two small down *pillows* with fine linen pillow-cases must all be provided.

A large piece of sheet *mackintosh*, which can be put over the mattress and under the bottom sheet, is necessary, to save the former in case of accident. This should not be required in a well-trained child after the first few weeks. A small indiarubber *hot-water bottle* with a home-made soft white flannel cover, completes the furniture of baby's cot.

Great care must be taken to air every article of bed clothing daily.

4. Baby's Bath and Toilet Requisites.

If a bath has to be purchased it is better to choose one that stands in its own frame on four legs (Fig. 9); but if there is one already in the house, which must be used to avoid expense, then all that is necessary is to obtain a firm stool upon which it can be placed. This should be of a convenient height from the floor to avoid undue stooping on the part of the nurse.

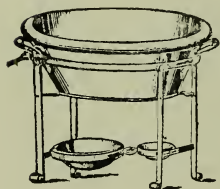


FIG. 9.—Oval Nursery Bath and Stand.

A white enamel, or white china bath is excellent, and can be obtained with a cover.

Preparations for the Baby.

A china *soap-dish* is necessary, and the soap should be of the finest quality, free from all soda. There are so many excellent varieties that it is impossible to mention any one in particular.

The Sponges should be of a fine soft texture: one kept specially for the face, and the second used as a bath sponge. Both must be thoroughly rinsed and soaked before using to free them from all sand and grit.

A Washing Flannel should be of the softest nature.

The sponge and flannel must never be kept in a covered dish, but always left open and free to the air. In fact, it is better to hang them both up after use, to ensure thorough drying; this prevents the possibility of the musty, unhealthy smell they sometimes acquire.

Should a sponge become dirty and grey through use, as is often the case, it may be useful to know that one of the best ways of cleansing it, is to soap it well in fairly hot water with Brookes' soap, known as "Monkey Brand," and then to thoroughly rinse it in several basins of fresh warm water. Sponges should never be put into boiling water, as this ruins their texture.

The Bath Thermometer (Fig. 10).—This must always be included in the outfit. A bath should never be given to the child until the heat of the water has been accurately tested and registered.

Bath Aprons for the nurse of large size and of a soft

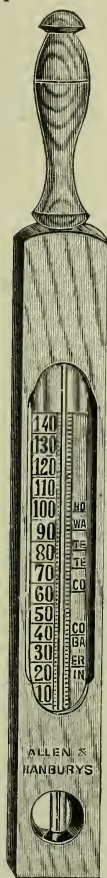


FIG. 10.—
Bath
Thermo-
meter.

Mother and Baby.

variety of flannel, together with a large mackintosh apron, must be provided.

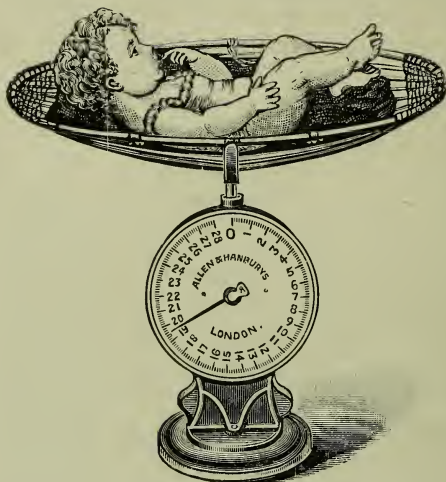


FIG. 11.—Weighing Machine for Infants.

There are numbers of these machines made. All that is required is simplicity and accuracy, and the ordinary scales are better than the hook-spring balance. There is no reason why the mother should be put to the expense of buying special scales; the ordinary kitchen ones (Fig. 12) may be used, provided the weights are increased.

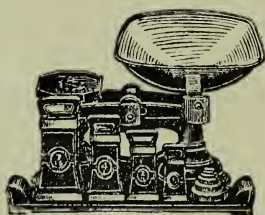


FIG. 12.—Weighing Machine.

5. The Nursery.

Where this is possible a child should have its own day and night nursery at least after the first year. Of course, in many homes this is quite out of

Preparations for the Baby.

the question, and one room has to suffice. It is all important that even this should be set apart and carefully prepared beforehand, and kept for baby as strictly as the mother's bedroom is reserved for her own use.

CHARACTERISTICS OF THE NURSERY.—The room should be fairly large, and on the same floor as the mother's bedroom, and within her easy reach, especially when she does not have the whole care and charge of the child herself. The room should be spacious and airy, with good *windows* that open freely. The sash-frame type is preferable to either the French or casement variety. Windows that are out of reach of the child will save both the mother and nurse many an anxious moment. The room should have a sunny south-east aspect, and never face north, or north-east. Sunshine is of vital importance to a growing, developing child. There should be an *open fireplace*, and on no account should a gas fire be substituted for a coal one. It is very important to test the chimney as to whether it smokes or not before finally deciding upon the room as being suitable. Too often this little detail is omitted, and great is the distress and annoyance occasioned when, after all has been prepared and the fire lit, it is found to smoke badly! If on testing the chimney beforehand it causes annoyance, a different pot or a "tall boy" added to the chimney-stack may cure the trouble. If, however, after this, smoke still comes down into the room, even though in a lessened degree, it is far wiser to discard the room, and if possible select another. The fireplace should be surrounded by a high fireguard fixed on

Mother and Baby.

buttons at the bottom and a good hook at the top, to prevent the possibility of its being pulled over.

The method of *lighting* the room must be carefully and thoughtfully planned. Where electric light is already installed, it is not difficult to arrange brackets in such a way as to produce a good uniform general light. These lights should be efficiently shaded, especially where metallic filament lamps are used. The strong glare from these is most harmful to the eyes of the child, and trying both to the mother and nurse. If electric light is not present, then well-regulated incandescent gas burners may be used. The drawback to gas is that it burns up the oxygen in the air, and unless care is exercised, the atmosphere becomes quickly vitiated. A simple paraffin lamp of the cosmos type of burner, not duplex, is of the greatest comfort, especially where there is only one room for the day and night nursery. It should stand on the centre of the table, and have a green shade, so that the glare is subdued for the sleeping baby and yet gives a good light for any work or sewing that may have to be done. A night-light at night may be used with advantage.

The Floor.—Perhaps the most pleasant flooring is a thick cork carpet. It is warm to the feet, easily cleaned and washed over, and lasts a very long time, the only drawback being that it is rather expensive in the first place. If this can be used it should be laid all over the floor, leaving no margins around the walls. If desired, in the centre of the room a large square of carpet or a rug may be spread. It should not be nailed down, but left free so that it can easily be taken up for sweeping purposes, and be removed

Preparations for the Baby.

to be shaken. Linoleum should be avoided as it is very cold to the feet. Sometimes Japanese matting is suggested. It has the advantage of being easily wiped over, but it stains quickly and has the great disadvantage of letting through all the dust, which accumulates underneath and can only be removed with difficulty.

The Walls.—Nothing can be nicer than covering the walls with a plain paper, which has a smooth face; those with a rough surface should be avoided as they readily collect dust, but the smooth paper can be wiped down every week without harm. Too much stress cannot be placed on the necessity of having plain or very simple papers; those which are thickly covered with illustrated nursery rhymes are harmful to the growing and often excitable child. The great tendency nowadays is to crowd too much into the little brain. Instead of rest being possible, the pictures attract the attention, rivet the eye, thought is immediately developed, and the brain instead of resting is excited, and all sense of repose lost. By all means let good, happy pictures be provided. The remembrance of these pictures studied in childhood is often treasured throughout life, but the overcrowded mixture of pictorial illustrations on wall-paper and linoleum produces only a confused mental picture, which is neither good for the child's growing artistic perception, nor for its rest and repose.

The Furniture.—The furniture should be light, but not necessarily white. That which can be well cleaned and polished is just as good as having that which can be scrubbed. Common-sense cleanliness,

Mother and Baby.

if thorough, is far better than going to the expense of buying furniture which is specially made to undergo the perils of the bucket and scrubbing-brush. Cleanliness, freedom from dust, care that all corners and crevices, etc., are systematically cleaned with a heart full of pride for making the room nice, is surely better than having furniture all white, which so rapidly becomes yellow and marked by constant scouring.



FIG. 13.—Cot, with Movable Sides.

One useful point to remember in buying furniture is, that the modern patterns with rounded corners, instead of the sharp angles, which inflict such nasty bruises on the little heads of early toddlers, is very much to be commended.

The furniture should stand preferably on feet, to raise it about 6 inches off the floor; this enables sweeping and cleaning underneath to be readily accomplished. A little table and chair is of great use for the child. They should be on the model of those supplied to the infant classes in schools and

Preparations for the Baby.

kindergartens. It is a great advantage to the little one to be able to play happily on the table with its toys, without having to assume the very uncomfortable positions often necessitated when on the floor.

The Cot (Fig. 13) should be of iron or brass, and have high sides and ends, one or both of which can be let down when desired.

The Toys.—These should be of the simplest variety, something that the child can play with and not of the elaborate mechanical type. It is wise not to overburden the child with these treasures, but to let it have a few for several days and then another set, while the first are put away for a week or so, they can then be brought out again, and will be welcomed as old friends.

The amusements should be simple and capable of being self thought out and developed.

If the child is tired, do not try to distract him by dangling some fresh object before his eyes or by making some new noise around him, such as squeaking rabbits and birds. Let him rest or lie on a rug and do nothing for a little while.

The Temperature of the nursery should be as even as possible: 60° F. is a good medium heat; in winter it is necessary to keep it higher up to 64° or 65°. It should be observed by the use of a thermometer kept hanging on the wall (Fig. 14), in a place

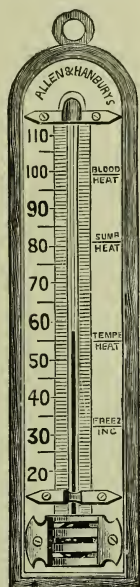


FIG. 14.—
Room Ther-
mometer.

Mother and Baby.

out of the direct draught of the door and window, and away from the heat of the fire.

Ventilation.—Great care must be exerted to have the room fresh without draughts. This is best accomplished by keeping the window open at the top, which enables the warm rising used-up air to pass out, and the cooler fresh air to come in. The chimney is an excellent outlet for bad air, especially if the fire is lit. A fresh supply must come in and take its place, and unless the window is open stale air will be drawn in from other parts of the house, under the door or through other crevices and cracks. If, especially in cold weather, there is a fear of draughts, an excellent way of obtaining fresh air from the window is by raising the bottom sash about 4 inches, and placing in the opening an accurately fitting board; the air will then enter between the upper and lower sashes in an almost imperceptible current. A room should never be allowed to get close. Ventilation has failed if it is not employed until the air has become smelly and stuffy.

6. Six Rules of the Nursery.

On no account should the following be allowed in the nursery:—

1. The washing of diapers and soiled linen.
2. The drying of clothes or napkins.
3. Unemptied slops and used chambers.
4. The storage of food or milk in any cupboard or shelf.
5. The washing of used breakfast or tea crockery.
6. An unguarded fire.

Preparations for the Baby.

7. The Perambulator.

Special care should be exercised in the selection of a perambulator for the outings. It should not be used until the child is about two months old, and should be of a type which permits it to lie down. Between the age of eight and nine months the block over the well may be removed and the sitting position assumed, the back being comfortably supported with small cushions and pillows.

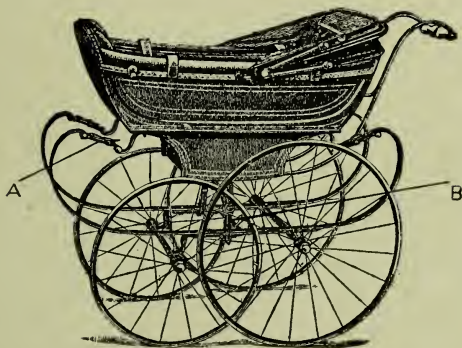


FIG. 15.—Baby's Perambulator.

- A. *Leather hanging on the Cee Spring.*
- B. *Controlling Straps.*

The body of the carriage should be hung on leather attached to the Cee springs (Fig. 15, A) to save all jolting, but the swing should not be too great or the child may be jerked out of its place. This movement is controlled in a well-made perambulator by two straps fixed under the body, attached either to the axle of the wheels or the flat portion of the spring (B in figure). Indiarubber tyres are, of course, an essential.

Mother and Baby.

A hood should also be provided to give shelter from the wind and rain, but this should not be so deep as to prevent a free circulation of air.

In summer time a washing canopy is a great advantage as a protection from the direct rays of the sun, and should be lined with dark green. Too much stress cannot be laid on the necessity of letting the child lie in the shade when out-of-doors in sunny weather. Often a nurse has been seen sitting reading a book, with one foot on the wheel of the perambulator and her own face and shoulders sheltered from the sun by a parasol, but the poor child lying fully exposed to the blinding glare and heat.

Go-carts and folding carriages should be avoided ; in most, the child is unable to lie down, though in some this can be arranged. The folding go-cart is convenient, but it is not to be commended : it is cold, and the low seat thus brings the little one into too close contact with the dust from the roads.

CHAPTER III.—BABY'S FIRST TOILET. CHARACTERISTICS OF A NEWLY-BORN INFANT. BABY'S DEVELOPMENT.

A. BABY'S FIRST TOILET.

i. *Early Duties.*

1. CARE OF THE MOUTH.
2. EXPANSION OF LUNGS BY CRYING.
3. THE EYES.

ii. *Baby's First Bath.*

1. REMOVAL OF WAXY SUBSTANCE FROM THE SKIN.
2. TEMPERATURE OF BATH.
3. DURATION OF BATH.
4. DRYING.
5. POWDERING.
6. CARE OF THE CORD AND APPLICATION OF BINDER.
7. ACTION OF THE BOWELS. MECONIUM.
8. PASSING OF THE URINE.

iii. *Clothing.*

iv. *Baby's First Feed.*

v. *Baby's First Sleep.*

B. CHARACTERISTICS OF A NEWLY-BORN BABY.

i. *General Appearance.*

1. SKIN AND COLOUR.
2. SIZE AND WEIGHT.
3. THE HEAD.
4. THE EYES.
5. THE NOSE.
6. THE CHEEKS.
7. THE MOUTH.
8. THE CHEST.
9. THE ABDOMEN.
10. THE LIMBS.
11. THE NAILS, HAIR, AND TEETH.
12. THE GENERAL POSITION OF THE CHILD.

ii. *The Normal Healthy Functions of the Body.*

1. RESPIRATION.
2. HEART AND CIRCULATION.
3. TEMPERATURE. NORMAL 98·4° F.
4. ACTION OF THE BOWELS.
5. PASSING OF THE URINE.

C. BABY'S DEVELOPMENT.

i. *Baby's Diary.*

CHAPTER III.

Baby's First Toilet. Characteristics of a Newly-born Infant.

“ My child is lying on my knees.
The signs of Heaven she reads :
My face is all the Heaven she sees—
Is all the Heaven she needs.

“ And she is well, yea, bathed in bliss,
If Heaven is in my face—
Behind it all is tenderness
And truthfulness and grace.

“ I mean her well so earnestly,
Unchanged in changing mood :
My life would go without a sigh
To bring her something good.

“ And so I sit in Thy wide space,
My child upon my knee ;
She looketh up into my face,
And I look up to Thee.”

George MacDonala.

A. Baby's First Toilet.

1. Early Duties.

The full preparations having been made, it is now necessary to consider the early needs of the newly-born baby, and how these needs are to be met, after which it will be interesting and helpful to note the characteristics of the little one.

Mother and Baby.

1. THE MOUTH; AND 2. LUNGS.—Directly the baby is born the first thing to be done is to see that it is breathing well, and is crying lustily. This enables the lungs to be fully expanded through the large inspirations produced by the action of crying. The mouth should be carefully and gently wiped out with a soft piece of linen, placed on the tip of the little finger. Too much gentleness cannot be exercised, for the mucous membrane of the mouth is very delicate, and is easily grazed. The object of this action is to remove any mucus or fluid that may have entered the mouth during the child's birth, and which if allowed to remain might fall back into the throat and produce choking or suffocation.

3. THE EYES.—The next duty, and a very important one, is to carefully and thoroughly cleanse *the eyes*. The baby should be warmly wrapped in a soft blanket, and then this operation can be performed without hurry. If only greater care was shown in washing out the eyes immediately after birth, cases of blindness due to early neglect would be practically unknown. These cases are due to some of the discharge from the mother's parts getting into the eyes, and which if left, sets up acute inflammation under the eyelids with profuse yellow discharge; the eyes are rapidly affected, and either impaired or total loss of sight results. This terrible condition can be easily and completely prevented. The eyelids should be carefully wiped with one of the little squares of soft linen. This linen is placed on the first finger and passed firmly over the closed eyelid from the inner corner of the eye outwards, removing thus, any discharge or moisture collected in the corner of the

Baby's First Toilet.

eye, or on the eyelids. The same piece of linen must never be used twice, but should be burnt directly after use. The eyelids are then carefully opened between the first and second finger, and warm freshly-made boracic lotion is dropped or run into the eye. It is often advisable to wash the eyes out with nitrate of silver in a weak solution ; but this must never be done except under medical supervision and direction. If used it will be supplied by the doctor, so that it need not be one of the items provided by the mother beforehand.

The child can now be left wrapped up in a blanket and placed in a safe warm corner, until its turn comes to be washed, after the mother has been made comfortable in bed.

2. Baby's First Bath.

Everything should be ready by the fire, preferably in the mother's room, for naturally she likes to be able to see and watch all that is being done for her little treasure. The bath must be ready, with cans of hot and cold water handy, the little clothes on the guard near the fire, the binder rolled up, and a needle threaded with white woollen mending. The windows should be shut, and a screen placed around the bath and chair. Before actually beginning the bath it is advisable to rub the child all over with vaseline or lanoline ; this enables the nurse to easily remove, by washing, the white cheesy substance which often adheres in more or less quantity to the skin at birth. This substance is difficult to get rid of without the addition of a little grease, and it might necessitate rubbing to such an extent as to injure or

Mother and Baby.

chafe the delicate skin. The bath may now be prepared, the cold water put in first, and the hot water added; this insures a more thorough mixing of the two. The heat must be most carefully tested by the bath thermometer (Fig. 9, p. 41), or the elbow of the nurse, *never by the hand*; the temperature should be 100° F.

The head and face should be washed with soap, sponged, and dried first, care being taken with the eyelids, nose, the folds of the skin at the back of the neck, and the irregularities of the ears, the rest of the body being still covered with a blanket. Following this the whole body should be rubbed gently all over with soap on the flannel, after which the baby is placed in the bath, the body being covered with water as far as the chin. The child should be supported on the nurse's left arm, while her hand grasps the left shoulder with one finger in the arm-pit. This prevents the infant slipping too deeply into the water. The bath should not be of more than two or three minutes' *duration*, and the baby must then be lifted out, having its legs and back supported by the right hand of the nurse.

Drying.—A warm Turkey towel having been spread on the nurse's knee, the child must be quickly covered over and dried. The drying should always be done by gentle dabbing, never by rubbing; the skin at this stage is too delicate to stand any friction. No sharp-pointed instrument, such as a hairpin, must ever be permitted in cleaning or drying the ears or nose, as this may cause permanent injury or deafness. A little twist of soft absorbent cotton-wool is all that must ever be used.

Baby's First Toilet.

Powdering.—The body is now dusted all over with dusting powder, great care being taken never to apply it to a wet skin.

The Cord must be dealt with in a special way after the first bath. It should be cautiously dried and minutely examined to see if there is any slight bleeding or oozing from the end. Should there be, then it must be re-tied, and if this stops any hæmorrhage there is no need for further measures; if, however, there is any profuse or prolonged bleeding, medical assistance should at once be summoned.

After this examination and the condition is found to be satisfactory, the cord should be dusted freely with boracic powder, and then surrounded and covered in a strip of antiseptic gauze freshly taken from the packet. The cord should always be kept flat and laid out straight, never twisted or curled round; this enables it to dry off much more quickly. The whole cord and gauze should now be wrapped in a soft piece of linen and placed in an upward direction on the baby's abdomen. This prevents it becoming moistened by damp diapers. The whole object of this treatment of the cord is to enable it to quickly dry and shrivel, and so separate off in about five or six days, or even less. It will be kept in this position by the flannel binder, which should now be carefully and smoothly adjusted.

The Binder.—It is important to remember that it is easy to wrap this round too tightly, producing discomfort and hindering the movements of the abdominal muscles in respiration. A binder so applied cannot be too rigorously condemned.

Baby's daily baths are much the same as the first,

Mother and Baby.

with the exception of the preliminary application of grease, which is unnecessary later. For the next few days, however, until the cord has come off and the navel has healed, perhaps it is better not to put the child into the bath, but let it be washed on the nurse's knee, care being taken to keep the cord perfectly dry. After this the daily morning bath should be regularly given, and at night a warm sponge all over.

Action of the Bowels and Bladder.—While the child is being bathed and dried care should be taken to notice if the little one passes its water (urine), and also if the bowels have been opened. The first few motions passed, which are quite different from the later ones, consist of a dark greenish-brown, treacly substance, called meconium; and only gradually during the course of the next few days does the amount lessen, and the motions assume the ordinary characters.

3. Clothing.

After the baby has thus been washed, dried, and powdered, and the binder applied, a little knitted vest with long sleeves should be slipped over its head; a soft, warm Turkey towelling diaper fixed on, not too tightly, followed by a light but warm, fine flannel or nun's veiling nightgown. The hair must be gently brushed, and the soft head-flannel put over its head. This then finishes the little one's first toilet.

4. Baby's First Feed.

The baby should now be put to the breast soon after it is dressed; there will be no milk at present,

Baby's First Toilet.

but the mere fact of sucking helps the mother by stimulating the muscles of the uterus (womb) to contract, and thus preventing the chance of hæmorrhage.

5. Baby's First Sleep.

The child should be taken away in fifteen or twenty minutes and put into its little cot and allowed to sleep, but it must be under the careful observation of the nurse. It should lie on one side and be carefully tucked into this position.

B. Characteristics of a Newly-born Baby.

1. General Appearance.

"Mummy, how ugly he is," was the exclamation of a little brother and sister when they saw for the first time their new baby brother three days old. This description, however, is by no means correct of all babies; some are pink and white from the hour of their birth. As a rule, however, a newly-born baby is of a somewhat mottled red, which in the course of the next two or three days becomes of a yellowish tint, that disappears at the end of a week or thereabouts, when the skin assumes a lovely rose-pink, the palms of the hands and soles of the feet being of a deeper shade. The skin is covered with a most delicate down, which gives the body such a beautifully soft and velvety feel to the touch.

2. SIZE AND WEIGHT.—The usual size of a baby is about 21 inches in length, but it may measure 24 inches. The weight varies, 7 lbs. being the average, though it is not at all uncommon for a

Mother and Baby.

child to weigh as much as 9 lbs. It may also be less than 7 lbs. even in a perfectly developed child.

3. THE HEAD.—The first thing which is noticeable, perhaps, on looking at the baby is the large size of the head in comparison with the rest of its body. On examining the head there will be found on the

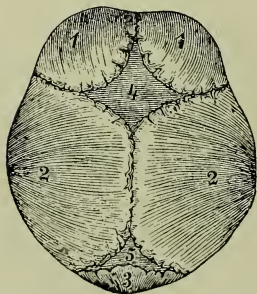


FIG. 16.—Bones of the Head at Birth.

1. *Two Frontal Bones.*
2. *Two Parietal Bones.*
3. *Occipital Bone.*
4. *Anterior Fontanelle.*
5. *Posterior Fontanelle.*

top a lozenge-shaped space between the bones (Fig. 16), which is only covered with the skin and membrane. This space is called the *anterior fontanelle* (4), and through this the pulsation of the brain can be distinctly felt. This does not close until after the first year of life, when the bones unite and form a complete covering (Fig. 17). (5) The posterior fontanelle is small and difficult to detect.

The movement of the head cannot be controlled by the child for some time after birth, and it is liable therefore to roll from side to side, or backwards and forwards, with every alteration of the position of the body. Great care should be taken when lifting the baby to give firm support to the head, especially when handling the little one during dressing and washing operations. The head may, for the first few days after birth, be of an unnatural form, owing to pressure upon it during labour. No anxiety, however, need be felt by the mother, as in the course

Baby's First Toilet.

of a very little while all signs will have disappeared, and the head will assume its normal shape.

4. THE EYES.—The eyelids are mostly kept closed, even when the child is not asleep, but when opened, the eyes will be seen to be bright and clear and very dark, nearly always grey in colour. It is comparatively rare for a child to have any colour in the iris (the coloured portion of the eye) at birth ; this appears later.

Tears.—A baby has no tears when it cries in early life, these do not develop until the end of the sixth week.

5. THE NOSE is hardly ever well formed, but is more or less flat, especially during the first week ; this may have been accentuated by the pressure upon it during the confinement.

6. THE CHEEKS.—After a few days the cheeks assume their natural colour.

7. THE MOUTH.—*The Lips* are pink, but if of a bluish tint which does not seem to disappear, this should be pointed out to the doctor. It may be due to no very definite cause, but, on the other hand, it sometimes points to the existence of heart trouble,

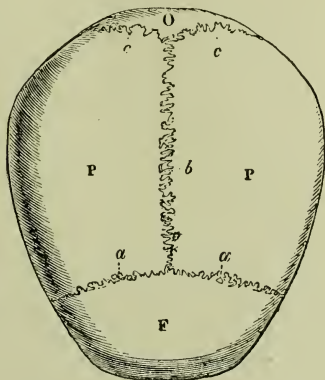


FIG. 17.—After the Fontanelles have closed.

F. *Frontal Bone.*

P. *Parietal Bones.*

O. *Occipital Bone.*

aa, b, cc. *Sutures, where Bones interlock.*

Mother and Baby.

especially if this "blueness" is noticed in the fingers and tips of the ears as well.

The Tongue.—During the first week or two the tongue is nearly always covered with a thin white fur, and the mouth as a whole is drier than in later life, for the *Saliva* is not secreted by the glands until the fourth month. It is quite an uncommon event to have a baby born dribbling.

8. THE CHEST is decidedly flat and ill-developed in comparison with the rest of the body, but it must be remembered that the lungs are not brought into use until after birth, when independent respiration is established.

9. THE ABDOMEN, or as it is erroneously called, the stomach, is large and prominent when compared with the chest.

10. THE LIMBS.—The arms and legs are short in comparison with the rest of the body.

The Muscles of the limbs should be firm and plump, not flabby and soft, when touched. The skin ought to be stretched tightly over them, never lying in loose wrinkles and folds, as is seen in a premature or wasting child. The newly-born baby has great power of grasping; if the finger of the nurse's hand is put within its palm, the little fingers take hold so firmly that the child may even be raised.

The Legs are often bent or bowed, but when freedom of movement is allowed this to a great extent passes off, though a slight curve remains for a long time afterwards. *The Feet* are nearly always turned inwards, the soles coming together, and in some cases this is so marked as almost to suggest a deformity. This also passes off in the course of a

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little while, so that no anxiety need be felt, unless there is some true mal-formation, which has been pronounced as such by the doctor.

II. THE NAILS, HAIR, AND TEETH.—*The Nails* in a fully-developed baby are exquisite little things, being of a pinkish colour, reaching down to the ends of the fingers and toes. In a premature baby these are deficient both in size, length, and hardness. This fact is often used, to decide whether the child is a full-term baby, or whether it has come before its time.

The Hair is usually of a dark colour, and greatly varies in quantity. The first crop all comes off, and the permanent hair will then gradually make its appearance.

Teeth.—A baby is nearly always born without teeth, but occasionally one or even two may be present. If so, nursing may be difficult from the fact that the nipple is pinched to quite a painful degree.

12. THE GENERAL POSITION of a child just after birth and during sleep is one of entire relaxation. The head usually lies a little to one side or the other, the arms are bent upon themselves, the thighs and knees are drawn up, the whole condition being one of complete flexion or rest.

2. The Normal Healthy Functions of the Baby.

These functions should be carefully observed, so that any condition which is not normal may be recognised at once.

I. RESPIRATION.—The breathing should be quiet and regular, carried on without effort during sleep, though of course while awake it alters according to whether the child is crying, or sucking, or

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indulging in other movements. *Type*.—A child's breathing differs in character from that of an adult in being what is called abdominal instead of chiefly of the chest type. If examined it will be seen that the chest moves very little, whereas the abdominal muscles move freely. *The Rate* of breathing decreases as the child grows older. At birth, and for the first three or four weeks, the average rate is 40 per minute; during the next twelve months about 28 times a minute, until, in adult life, it is as low as 16 or 18 per minute. During sleep, however, the respiration is slower, and the inspiration and expiration become of a more equal duration. In a child it may be noticed during sleep that the breathing is irregular, or almost appears to stop at times. This fact, if it is not known, might cause undue anxiety to the mother; it is a sign of no consequence, unless, of course, there is some illness such as bronchitis or pneumonia, when it should not be neglected.

2. THE HEART.—The rate at which the heart beats is gauged by taking the pulse, *i.e.*, counting the beats at the wrist or at any other convenient spot where an artery is comparatively near to the surface. The heart, though more regular, is greatly influenced by various conditions; excitement, crying, sucking, etc., all tend to make it beat more rapidly. It is not uncommonly found to be irregular during sleep, but this need not in any way frighten the mother, as it is present in perfectly healthy children. *Rate*.—At birth about 130 to 150 per minute; during the first six months of life from 100 to 110; and during the first and second year, 90 to 100. In adult life, 72 to 80.

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All these figures are only approximate, for the rate of the heart differs in all children.

3. TEMPERATURE.—During the first two weeks, the temperature is usually found to be 99° F., but very shortly it falls to 98.4 , which level is maintained throughout life except in periods of illness.

A child's temperature may rise from the slightest cause; even a fit of crying, indigestion, the omission of having the bowels opened one day, or a wakeful night, all tend to cause this. No great anxiety need be felt under these circumstances, for it will be found that the temperature will soon come down to normal again after the removal of the exciting cause.

4. THE ACTION OF THE BOWELS.—The bowels are usually opened directly after birth or during the process of washing and dressing. The early motions have already been described, and every day makes a difference in their appearance. They gradually assume the characters of ordinary infants' motions.

5. THE PASSING OF THE URINE.—This usually takes place soon after birth; if, however, any difficulty is experienced in passing water, no time should be lost in informing the doctor.

C. Baby's Development.

There can be nothing more fascinating and wonderful to a mother to watch, than the daily development of her child. It may be well to give the chief points which will enable her to take a really intelligent interest in the growth of the little one, though, of course, many other facts will be noted

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and treasured up in the mind of the mother and written on the page of baby's diary.

Loss of Weight.—During the first three days, a child nearly always loses 2 or 3 oz. in weight, but by the end of the first week this ought to be regained, and the weight be the same or a shade higher than at birth. After this, if healthy, there should be a steady gain of from 4 to 8 oz. a week.

Weighing.—The baby should be carefully weighed in a blanket just before its bath, and the result written down at once in the book provided for the purpose. This weighing should be carried out on the same day every week for at least the first year of the baby's life. It is advisable to have the figures checked by a second person to prevent any mistake and consequent disappointment. Care should, of course, be taken to weigh the child in a warm blanket, and then to weigh the blanket alone, and subtract its weight from the total.

The child, on the other hand, may be weighed when fully dressed, provided the weight of the clothing has been previously noted.

The scale is a very accurate indicator of the child's condition, of how it is progressing, and of how the food is suiting it. It ought to increase during the first three months from 4 to 8 oz. a week, and by the end of the fifth month the original weight at birth will be doubled.

After the first three months, the increase per week is not quite so high, 4 to 6 oz. being the more usual rate. This is quite natural, so that the mother must not jump to the conclusion that the child is not doing well. The last six months of the

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first year of its little life will show a steady gain, but a gain which is not quite so rapid as even that registered during the second three months.

A child's weight for the first five years may be shown thus:—

1st year.	{	First 3 months a gain of 4 to 8 oz. a week.
		Second 3 months a gain of 4 to 6 oz. a week.
		Last 6 months a gain of 2 to 4 oz. a week.

2nd year. A gain of 5 to 7 lbs. during the year.

3rd year. A gain of 5 to 7 lbs.

5th year. At the end of this year the child should weigh about 36 to 40 lbs. or $2\frac{1}{2}$ to $2\frac{3}{4}$ stones.

This may be illustrated thus:—

Weight at birth 7 lbs.

Weight at end of 3 months about 12 lbs.

Weight at end of 5 months about 14 lbs. (weight doubled).

Weight at end of 12 months about 18 lbs. or 20 lbs.

Weight at end of 2nd year (18 lbs. + 7 lbs.) = 25 lbs.

Weight at end of 3rd year (25 lbs. + 6 lbs.) = 31 lbs.

Weight at end of 4th year (31 lbs. + 5 lbs.) = 36 lbs.

Weight at end of 5th year (36 lbs. + 4 lbs.) = 40 lbs.

It is most important to carefully watch the scales when the diet of a child is altered. This is the surest indication as to whether or not the additional

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food is sufficient in quantity, nourishing enough, and suitable in quality.

The causes of loss of weight are many ; the following are some of the more common :—

An attack of indigestion from over-feeding, or the giving of unsuitable food.

The cutting of a tooth.

An attack of simple diarrhœa.

Hot summer weather.

Loss from any of these reasons is soon regained when the cause is removed, especially if the feeding is carefully regulated for a few days. If, however, the loss should continue in spite of no apparent cause, or there is no increase in the weight, it is not wise to delay seeking medical advice.

The Height of the Child.—Within the first year a healthy child should grow about 8 inches or even a little more. From the second to the fourth month 1 inch per month is the average increase, but after the fourth month up to the end of the first year it is generally only half an inch.

1. Baby's Diary.

Baby's diary up to about a year and a half is a very interesting document, and it may be of help to the mother to have it set forth in such a way as to be easily followed.

THE FIRST MONTH OR SIX WEEKS.—Baby's time should be spent mostly in sleep ; as much as eighteen to twenty hours out of the twenty-four is fully necessary. Towards the end of the first month baby's movements become much more frequent and vigorous,

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especially when the limbs are free, as just before or after the bath.

How much intelligence is really displayed or what things are actually noticed is difficult to say, but a baby undoubtedly knows quite well even within a few days of its birth (shall it be hours?) that it can get its own way, if once or twice the nurse or mother has given in to it. Hence the great importance of beginning moral training from the very earliest moment; it will bring untold blessing in the end, both to the child and all who are concerned. The sense of hearing is very early developed, even at the age of two weeks, and the child is more easily wakened from sleep by a sudden noise than by almost any other disturbance. For the first two days an infant is said to be deaf.

THE SECOND AND THIRD MONTHS.—During these months a marked development may be noticed. The movements become much more vigorous, and the child is often almost strong enough to jerk itself out of the nurse's arms in the bath, or off her knee afterwards. Efforts are also made to raise the head, with the result that the spine gradually begins to develop its double curves, instead of being flat or even rounded as it is up to this time.

The child now, to the mother's great delight, really begins to recognise her, and smiles when spoken to in mother's pretty baby language. Moving objects, or even bright lights and colours are noticed, attempts are made to follow them with the eyes, and to grasp them with the fingers. Red is the colour which attracts the child most. Crying is accompanied by tears at the end of the sixth week. When

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the baby is three months old it may have a bottle a day instead of one of the breast feeds.

The first crop of hair is lost about this time, and the permanent growth makes its appearance.

THE FOURTH AND FIFTH MONTHS.—By this time movements have developed, and now instead of being more or less purposeless they are made with some object, and the child often attempts to get into the sitting position.

The sense of sound has become more acute by the beginning of the fourth month, and efforts are made to locate them. The child readily knows its mother and nurse, and smiles when spoken to, but a look of wonder or distrust is noticed on its little face when strangers come near.

By the end of the fifth month baby should have doubled its original weight. Dribbling may be observed owing to the fact that the saliva is now secreted.

THE SIXTH MONTH.—This is an eventful month, for the first tooth is usually cut, though its eruption may be even as late as the seventh month. The two lower central ones are the first to be seen.

During this month development is marked everywhere. The movements become more full of purpose, and the child recognises many objects, but is still unable to estimate their distance.

Expressions of joy and pleasure are shown when amused, and the child is quite capable of crying or screaming if displeased.

THE SEVENTH MONTH.—This month is marked by the child being able, when placed in it, to maintain a sitting position. But not until the ninth month

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can it assume this position by itself; then with a half-amused, half-surprised expression, the act is accomplished for the first time.

THE EIGHTH OR NINTH MONTH.—Having gained the sitting position the child can now safely roll over on to its face, and after a good many tries, gains its knees. Crawling is attempted, but not without many a tumble forward on to the chest or chin, the strength of the arms not being quite sufficient to support the weight of the body in this new and untried attitude. Successful crawling is usually accomplished about the end of the ninth month. At this age baby immensely enjoys a game of “Peep-Bo,” laughing and smiling and fully entering into the spirit of the fun.

Baby should be weaned this month.

THE TWELFTH MONTH OR END OF THE FIRST YEAR.—By this time the child should be nearly three times its original weight. It now makes great attempts to walk, and is able to pull itself up into the standing position with the aid of furniture, but the first steps in actual walking come usually a little later. It can imitate movements such as waving a “Good-bye,” shaking the head, or throwing a kiss to daddy. Baby also understands a good many words, and uses one or two sounds to convey a definite meaning. At this age fifteen to sixteen hours' sleep in the twenty-four are necessary, and baby should never be kept awake by prolonging its games after bed-time.

THE THIRTEENTH MONTH.—At the end of this month or beginning of the next, after many attempts, and with the aid of a supporting and guiding finger, the child takes its first steps in walking.

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With almost an expression of fear, the breath usually held, and with a rush and a fall into mother's outstretched arms, the first steps alone are taken. This is usually followed by audible expressions of joy, a gulping laugh and chuckle, and a look of bewilderment and yet of satisfaction on its little face. This accomplishment is a great event in baby's history, and is always noted in mother's and granny's diary. When a baby falls in attempting to walk, it very seldom falls on to its face, but nearly always finds itself in the sitting position! The cause of this is not difficult to explain. The muscles at the front of the legs are not at present so well developed as those at the back of the thighs, hence the body is pulled backwards rather than forwards.

By the end of the fourteenth or fifteenth month the child should be able to walk quite alone.

CHAPTER IV.

BABY MANAGEMENT.

i. *Baby's Baths.*

1. TIME AND FREQUENCY.
2. TEMPERATURE. BATH THERMOMETER.

ii. *Baby's Dressing.*

1. RAPIDITY WITHOUT EXCESS OF MOVEMENT.

iii. *Baby's Feeding.*

1. REGULARITY GOVERNED BY THE CLOCK.
2. HOW TO FEED BABY.
 - a. Position of the Mother.
 - b. Position of the Child.
3. TIMES OF FEEDING.
4. COMFORTERS OR DUMMIES.

iv. *Baby's Sleep.*

1. PREPARATIONS FOR SLEEP.
2. THE CHILD'S POSITION.
3. BABY'S BED-TIME.

v. *The Action of the Bowels and Bladder.*

1. HEALTHY MOTIONS.
2. UNHEALTHY MOTIONS.
3. HEALTHY URINE.
4. CARE OF THE NAPKINS.

vi. *Baby's Outings and Exercise.*

vii. *The Nursery Time-Table.*

CHAPTER IV.

Baby Management.

“The future destiny of the child is always the work of the mother.”—*Napoleon.*

Introduction.

The keynote of all successful management of infants and children is undoubtedly struck in the one word *regularity*. Regular management is essential from the very beginning of a child's life, and this leads to regular habits, the necessity of which cannot be over-estimated.

The times of the feeds should be arranged not by convenience, nor by the fretfulness of the child, but by the clock. Sleep should be undisturbed except at stated times, and these again must be governed by fixed rules.

More depends upon this early regularity in little details than can be seen at the moment. The child's health and happiness, the early development of character, all hang upon this, to say nothing of the health, rest, and comfort of the mother, besides being to the advantage and help of the nurse and all concerned. If given way to once, the baby, even in early days, well knows that it has gained a victory over its elders, and will readily “play the game” again, when it thinks it would like to be put to the

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mother's breast, or taken up and nursed. Firm, gentle discipline, coupled with absolute regularity, even though at first it may cause trouble, will bear valuable fruit almost at once, and be the beginning of willing obedience and good habits in later life.

Baby management may be considered under the following headings:—

- I. BABY'S BATHS.
- II. BABY'S DRESSING.
- III. BABY'S FEEDING.
- IV. BABY'S SLEEP.
- V. THE ACTION OF THE BOWELS AND
CONTROL OF THE BLADDER.
- VI. OUTINGS AND EXERCISE.

1. Baby's Baths.

The bath should be given every day, either in the morning or evening. If given in the morning this begins the formation of a healthy and refreshing habit, which should be kept up throughout life. In this case it is only necessary at night to give the child a good sponge all over with warm water. *The Temperature* of the water must always be registered by the thermometer. On no account should the practice of putting the child into the bath for the purpose of testing the temperature be allowed. It has not been unknown for a nurse to gauge the heat of the water by observing the effects on the child. If the skin became scarlet the water was too hot; if, on the other hand, it became blue, the water was too cold! Such a method cannot be too sternly condemned. For the first month the temperature should be 100° F.;

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the second, about 98° F., gradually lowered to 90° at the end of the sixth or seventh month. A cold bath should never be given to a very young child, but at the end of the first year it is well to sponge down the spine and back with a little cooler water. Cold water should not be used until the second or even third year. Young babies have very little animal heat, and when chilled it is difficult for them to regain what has been lost. The child turns blue, and is apt to remain cold for hours, and in some cases even to collapse.

At least an hour should be allowed to elapse between feeding and bath time. On the other hand, a meal should be given directly after the child has been bathed and dressed. It is well to remember one little point of great practical importance. Prepare the bottle before the bath, so that all that has to be done afterwards is just to heat it ready for use. This saves all delay, and enables the baby to be fed at once on the completion of its little toilet, besides preventing all hurry on the part of the nurse, to get the bottle ready quickly because the child is crying.

2. Dressing of the Baby.

The two great objects to be remembered when dressing a baby are :—

1. To put the clothes on quickly.
2. To move the child as little as possible.

The binder is the first little garment, and is rolled around the body, beginning below and working upwards to a level about $1\frac{1}{2}$ inches above the navel. This gives support to that part of the abdominal

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wall, which at first is always rather a weak spot. Great discretion must be exercised in putting on the binder, not to allow it to be too tight, and so hinder the movements of respiration and those of the stomach during digestion. A binder badly put on not infrequently leads to an attack of indigestion, with flatulence and even sickness. It is well to remember the position of the stomach, for it lies just under and slightly below the edge of the ribs on the left side of the abdomen.

The little knitted vest and flannel shirt, if used, are now slipped on, and the diaper fixed in position with a strong, guarded safety-pin. In cold weather the flannel pilch should be added. Care must be shown in not pinning either of these garments too tightly. The socks should be put on without waiting for the rest of the clothes. The whole body is now covered warmly, and if the feet and legs are left bare until after the dress, they frequently become blue and cold, and this could have been easily prevented by putting the socks on earlier.

The long flannel petticoat is now neatly tied in the front. It will be seen by this mode of dressing, that the child has not once been turned over after having been dried and powdered. It is still lying on its back.

The nainsook petticoat and little gown are put on together, the one having been arranged inside the other. The child is now for the first time turned carefully over on to its face, and the two garments fastened behind. Baby's dressing is thus completed as quickly as possible, and with only one turning of the little body.

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When the child is older, and consequently does not feel the cold so much, it is always advisable to let the limbs have free play. The movements enjoyed are excellent for the muscles, both of the arms and legs, and act as a form of exercise. At night all clothing must be changed. Every garment, of course, must be removed for the bath or warm sponge, but the same clothes that have been worn during the day should never be put on again for the night.

The cutting and care of the nails should be regularly carried out, and this is best done during sleep. The eyelashes should never be allowed to be cut.

3. Baby's Feeding.

I. REGULARITY GOVERNED BY THE CLOCK.—The intervals between the meals alter according to the age of the child, but at whatever time arranged the bottle must be given on the stroke of the hour. Nothing between meals should be the rule, except a few teaspoonfuls of drinking water if the baby is thirsty. The need of rest and regularity is as important to the digestive organs of the child as it is for the health and well-being of the mother. A little stomach cannot stand too frequent feeding, nor, on the other hand, can it bear to be overloaded by constant irregular additions to its contents. Pain, wind, colic, vomiting, fretfulness, and sleeplessness are all sure to be produced by this irregularity.

The mother, too, needs rest, the breasts must have intervals of quiescence between the proper feeding hours; if not, the organs become exhausted, and the

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milk is altered and irregular in its consistency and ingredients. The breasts instead of being firm and full become flabby, and are only partially filled with poor watery milk.

2. HOW TO FEED A BABY.—After the first three weeks *the mother* should be sitting in a comfortable low chair, so that the knees form a support to the weight of the child's body, and the infant can be held on the arm. It is best for her to bend slightly forward, so that the nipple is at the level of the baby's face, and falls as it were into its mouth. The nipple should project between the first and second fingers of the mother's hand, as in this way the flow of milk can be more or less regulated by pressure. The breast itself should be gently kept back from the child's nose, so as to prevent any difficulty in its breathing, which would at once hamper the action of sucking. The nipple should never be forcibly withdrawn after feeding, but left until the child releases it naturally. If, on the other hand, the milk is being taken too quickly or greedily, then the nipple should be gently removed for a few moments. Sometimes the milk flows almost too slowly and the action of sucking is difficult; this can often be helped by the mother exerting a certain amount of gentle pressure on the breast generally, though this should never amount to squeezing.

The breasts should be used alternately and never both at the same feed. Care must be taken to make the child empty the breast each time; if not, an accumulation of milk will occur, which is one of the most common causes of inflammation and abscess.

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The duration of each meal should be about fifteen to twenty minutes, but no hard-and-fast rule can be made. The time varies according to the child's condition, as to whether it is a strong and healthy baby or a little weakly infant. It also greatly depends as to whether the milk flows easily or the reverse. At the end of the third month there is no reason why one feed a day should not be replaced by the bottle. This can only be done, however, if the baby is healthy and is really thriving. If not started now, this addition should never be delayed longer than between the fifth and sixth months. This plan is not only good for the mother, but it also helps to accustom the child to the artificial mode of feeding, and greatly assists weaning at the ninth month.

If the mother has insufficient milk right from the beginning, it may be necessary to supplement the breast feeding with one or two bottles. It is far better to combine the two, than to deprive the child entirely of its natural food.

Early Feeding.—During the first two days after birth there is very little or no milk in the breast; it is not until the third day that the flow is really established. This fact, however, should never be used as an excuse for delay in putting the child to the breast. Regular nursing should begin from the very first; every four or six hours should be the rule during the day-time and once or twice at night.

Although there is no true milk present, there is a thin fluid, yellowish in colour, somewhat resembling milk, which is thicker in consistency and sticky to the touch. This is called colostrum, and it is

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all important for the child. It contains sufficient nourishment for its early wants, but it has also a distinctly aperient action on the bowels. It assists very materially in getting rid of all the dark matter (meconium) of which the early motions are chiefly composed.

Again, too, from the mother's point of view this early regular feeding is invaluable. It tends to get the nipple into good shape, and helps to stimulate not only the secretion of real milk on the third day, but aids in inducing the uterus to contract, and so hastens the return of that organ to the normal size. It is only under exceptional circumstances that the need arises to feed a child artificially before the true milk is secreted on the third day. But in this case, all that should be given is a little very dilute milk, to which has been added milk-sugar and water.

When the function of lactation is thoroughly established, the amount of milk secreted during the first few weeks is about one pint every twenty-four hours. Later this amount is larger and continues to increase with the requirements of the growing child, but the strength of the milk reaches its maximum about the end of the third or fourth week, and later varies very little in quality.

Neither the mother nor the baby should be allowed to go to sleep during nursing, as it is detrimental to both.

3. TIMES OF FEEDING.—After the first two days, during which the child should be put to the breast every four or six hours, the feedings should be more frequent. For the first four weeks the child should be fed every two hours during the day-time and

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twice during the night. At the age of three months the interval between should be two and a half hours, and from the fourth month to one year, gradually increased from three, to three and a half hours.

The following table may be of service :—

TABLE OF TIMES AND INTERVALS FOR FEEDING.

Age.	Interval Between the Feeds.	Number of Feeds in 24 Hours.	Times of Feeds at Night.
1 to 3 days	4 to 6 hours	4 or 5	3 a.m.
3 days to 4 weeks	2 hours	10	11 p.m., 3 a.m., 6 a.m.
1 to 3 months	2½ hours	8	10.30 p.m., 3 a.m., 6 a.m.
3 to 6 months	3 hours	7	—
6 to 9 months	3½ hours	6	—

TABLE OF TIMES FOR FEEDING.

Interval of 2 Hours.	Interval of 2½ Hours.	Interval of 3 Hours.	Interval of 3½ Hours.
Age 3 Days to 4 Weeks.	1 to 3 Months.	3 to 6 Months.	6 to 9 Months.
6 a.m.	6 a.m.	6 a.m.	6 a.m.
8 a.m.	8.30 a.m.	—	—
10 a.m.	11 a.m.	9 a.m.	9 a.m.
12 noon.	1.30 p.m.	12 noon.	12.30 p.m.
2 p.m.	4 p.m.	—	—
4 p.m.	6.30 p.m.	3 p.m.	3.30 p.m.
6 p.m.	10.30 p.m.	—	—
8 p.m.	—	6.30 p.m.	7 p.m.
11 p.m.	—	10 p.m.	10 p.m.
3 a.m.	3 a.m.	3 a.m.	—
10 Feeds.	8 Feeds.	6 or 7 Feeds.	6 Feeds.

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ANOTHER TABLE FOR FEEDING.

During the 1st Month.	During the 2nd Month.	From the 3rd to 10th Month.
Interval of 2 hours.	Interval of $2\frac{1}{2}$ Hours.	Interval of 3 Hours.
5, 7, 9, 11 a.m. 1, 3, 5, 9, 11 p.m.	5, 7.30, 10 a.m. 12.30, 3, 5.30, 8, 10.30 p.m.	5, 8, 11 a.m. 2, 5, 8, 11 p.m.
9 Feeds.	8 Feeds.	7 Feeds.

4. COMFORTERS OR DUMMIES.—If a comforter or dummy is used, it should only be allowed under special circumstances, and never as a routine thing. The habit of perpetual sucking is bad, and injurious in its effects.

Among *the drawbacks* may be mentioned the following:—The mouth of the child becomes altered in shape, the roof is more arched than is natural, with the result that the teeth are liable to displacement, the upper ones protruding over the lower, thus preventing good mastication in later life. This change in the shape of the roof may also lead to defective speech.

Breathing through the nose is hampered, the air passages become narrowed, and adenoids at the back of the throat develop, so that as the child grows up it becomes impossible for it to breathe except through the open mouth. Again, the perpetual sucking of a dummy also encourages an excessive flow of saliva, which may cause disturbance of the digestion.

If a comforter is used, it should be made of good

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firm indiarubber, which does not crack when chewed. After use it should be treated with just as much care as the teat of a bottle, *i.e.*, turned inside out, scrubbed and thoroughly cleansed, and kept in a solution of boracic acid until again required.

The precaution of pinning a dummy to the little bib or dress should always be taken, to prevent any risk of its falling on the floor and so gathering up dust and dirt. It may be used when an infant is very restless and refuses to be soothed by other means: when a child is cutting a tooth and the gums are swollen and painful it is often a relief to bite on to the rubber. If a hole is made in the dummy it must at once be discarded.

4. Baby's Sleep.

In this, early care will well repay the mother and the nurse, for if the habit of "being put to sleep" is early formed, it will be very difficult to break the child of it later. During the first two months baby ought to sleep most of its time, and it should not be disturbed except at regular intervals to be changed and fed. The child should never be allowed to sleep in the mother's bed, either at night or during the day; the cot or basket, however, ought to be placed within sight, so that it can easily be reached if necessary.

I. PREPARATIONS FOR SLEEP.—Before putting the baby into its cot, the napkins should always be examined, and changed if found to be damp or soiled; secondly, it should also have been fed, so that it need not be again disturbed for at least two hours or longer; and thirdly, it is all important to feel if the

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child is warm. Restlessness is frequently caused from feeling chilly, but by taking the simple precaution of placing a warm indiarubber bottle in the cot, a long peaceful sleep often results.

Overweighting with bed-clothes will not produce warmth, and will only give the child a sense of oppression, followed by uneasiness, night-starts, and wakefulness.

When baby is prepared for sleep, it should be laid down at once in its cot with no preliminary rocking or nursing; if this habit is begun from the first day of its life, it proves of lasting benefit. To prevent the child waking and crying, just for the first month or two, it is a good plan for the mother or nurse to arrange to be near at hand about the time of waking. The result will be a feeling of comfort and safety to the little mite, which will soon lead to its waking up quite happily without any fear. In a short while, even if no one is near, it will lie awake cooing and smiling to itself without crying for quite a long time. It is not necessary to take the child up directly it wakes; in fact, it is much better for it to be gently spoken to and left lying down until the regular time for feeding arrives.

At night there should always be a night-light burning, just giving a subdued general light; this prevents all fear of the dark, and after some months can be dropped without any trouble.

2. THE CHILD'S POSITION.—There is a great advantage in knowing the best position in which to place a child during sleep.

It should lie on each side alternately. A baby should never be put to sleep on its back, and if found

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so lying, should be gently rolled over and carefully tucked in without waking it. The reasons for this precaution are the following :—First, sleep on the back is never so restful, and is very liable to be broken by dreams, followed by night-starts and frights; and secondly, it is not a safe position. During sleep the child may be sick, and a little milk fall backwards into the throat and produce choking or even suffocation.



Fig. 18.—Ear Cap.

Later on, if the child likes to roll over and lie on its stomach during sleep there is no reason why this should not be allowed; in fact, change of position is good. A mother or nurse has often been heard to say, "I cannot think why baby will lie over on its front, I am sure it must be ill," and a great deal of needless anxiety is thus endured.

There is one little precaution which should be taken, especially in some children, and that is to see

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that the ears are quite flat against the head. This will to a great extent prevent the prominent ears seen in later life. It may be necessary to have a neat, well-fitting linen band tied over the head and across the ears ; a more elaborate arrangement may be bought having the same effect. (Fig. 18.)

Sometimes during sleep the baby's head becomes moist, and even covered with drops of perspiration. This may be due to perfectly natural causes, such as hot weather, a stuffy bedroom, the bed-clothes being too heavy or too many. But, on the other hand, it may be occasioned by weakness produced by improper feeding or by the beginning of a disease called rickets, of which it is a very common early symptom. It is essential that the child should be carefully watched, but by no means let the mother jump to the conclusion that it is developing rickets and is consequently ill. It is much better to call in medical advice before worrying over what may be, after all, nothing serious.

3. TABLE OF BABY'S BED-TIMES.

Up to the Age of Four Months.

Put to bed at 6 p.m.

Roused at 10.30 p.m. to be changed and fed.

Roused at 3 a.m. to be changed and fed.

From the Age of Five Months to One Year.

Put to bed between 6 and 6.30 p.m.

Bottle at 10.30 p.m.

Sleep until 6 a.m.

Changed and fed.

Sleep until 8.30 a.m.

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5. The Action of the Bowels and Control of the Bladder.

Too much cannot be said about regularity and the forming of good habits from careful training.

In a healthy infant there should be two or three motions, not more, in twenty-four hours.

The napkins should be examined and changed if damp or soiled, every time the child is picked up to be fed. Restlessness during sleeping hours may be due to a wet napkin, which if changed will produce a sense of comfort, with the result that the child will soon fall off into a quiet peaceful sleep.

At the age of three months it is not too early to place the child over a little chamber fixed between the nurse's knees ; it is surprising how soon the custom is acquired to make use of this instead of the napkins. The baby should invariably be placed upon the chamber the last thing at night, even though this may necessitate the sleep being disturbed. This precaution often entirely obviates the mishap of wetting the bed, which all too easily may develop into a habit.

When a child wets the bed, especially after careful training and every provision having been made to prevent it, the very worst line the mother can follow is to scold and punish it. No amount of punishment in many cases will be of any avail ; in fact, frequently the child only becomes worse, and more and more ashamed of itself. It is a pitiful sight to see a child cowed when, after all, the trouble is something it cannot either help or control.

Wetting the bed at night is sometimes caused by

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weakened nerve-control of the bladder. Secondly, some unnatural substance, called "grit," being present in the water frequently causes irritation in the bladder and soreness of the little passage, with a sensation of scalding or burning on passing the water. Before a child is punished let the mother do all she can to cure the trouble. No fluid should be given after 4 p.m., that is to say, tea-time. The chamber should be used the last thing at night. The child should lie on its side, and, if necessary, be maintained in this position by a pillow wedged between the back and side of the cot. Flannel sleeping combinations or pyjamas should be worn, so that even if the bed-clothes are kicked off the body does not become chilled. The feet, too, should be kept warm. It is far better to put a hot-water bottle in the bed than to let the child be cold. Lastly, the clothing should be adequate, but never heavy. It has been recommended to try raising the foot of the bed; this has, however, so many disadvantages that it is not to be advised.

A treatment which is occasionally efficacious is that of sponging the child's spine after the bath with cool or cold water.

Should the trouble after careful perseverance and calm gentle persuasion be no better, then medical aid should be sought and the treatment then suggested carried out.

I. HEALTHY MOTIONS.—The healthy motions of an infant vary according to the age of the child, so that this must be borne in mind when judging the character of the stools month by month. It is very important for the mother to know these

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characteristics, so that she can distinguish healthy normal motions from unhealthy ones, due to some error in diet. In a healthy breast-fed baby, as already mentioned, the number daily should be two or three. The colour and consistency are different from those of a child of a year old, when they become formed owing to change of diet.

The baby's motions should be semi-liquid, rather of the consistency of the yolk of an egg; yellow in colour but not greenish; they should be quite smooth and free from lumps or white bits of curd; and there should be very little or no smell attached to them.

In a healthy bottle-fed baby, the motions, if the milk is agreeing, should closely resemble those of a breast-fed child. The nearer the resemblance of the two, the greater the success shown in the artificial feeding.

2. UNHEALTHY MOTIONS may vary, and several types may be distinguished, all of which should warn the mother that something is wrong either with the food or general health of the child.

If they still persist, after alteration of the diet, medical aid and advice should be sought at once.

These motions may perhaps be classified as follows:—

(a) Yellow in colour, containing lumps of undigested curdled milk. May or may not contain some slime. Not very offensive.

(b) Green in colour, containing much or little slime, frequently streaked with blood. Very offensive, may or may not be frothy. Causing marked redness and soreness of the buttocks.

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(c) Pale and putty coloured, sometimes greasy and having a peculiar rancid smell.

(d) Hard-formed motions, scanty and infrequent.

If medical advice is sought, it is most essential that a napkin with the motion should be kept for the doctor to examine; but this must *never* be harboured in the bedroom, but placed outside a lavatory window, covered in a clean chamber with a lid or wrapped in another diaper.

3. HEALTHY URINE.—A baby passes its water very frequently; it is of a pale yellow colour, but it should not stain the napkin. The amount passed is 8 to 12 oz. daily from birth to the end of the second year, and this quantity increases as the child grows older.

Sometimes the urine becomes reddish or orange in colour, and has a peculiar smell not unlike ammonia; in this case the napkins are stained, which enables this condition to be easily detected. On passing the water, a sensation of scalding and pain is produced which causes the child to scream; the buttocks and legs become rapidly red, followed by soreness, and the skin may give way and shallow sores be formed. This is often due to some little error in the feeding or need of more water in the system. The fact that even the youngest child needs water as well as milk every day is very often overlooked. The unaccountable restlessness of a child between its feeds is often immediately overcome by letting it have several teaspoonfuls of cold water. It is quite pathetic to see the eager eyes which follow the spoon when once the little one realises what it contains. Babies should be allowed water at least two or three times a day, especially in the summer weather or when cutting teeth, and the

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drinks should be copious and frequent if diarrhœa is present. The liquid waste in this complaint is very great and must be made up; it is a positive cruelty to the child to withhold water in these cases. Many a life has been saved in what seemed to be an almost hopeless condition of acute diarrhœa in summer by this simple remedy.

4. THE NAPKINS AND THEIR CARE.—Great care must be taken in keeping the child dry; if not, the skin of the legs and buttocks is apt to become very quickly chafed and sore. It is therefore of the utmost importance to know how to treat the napkins. No diaper should ever be allowed to be used a second time without washing. The practice of just drying those that have been wetted is to be absolutely condemned. All napkins when taken off should be plunged at once into cold water, and never be allowed to lie about. An enamel slop-pail with a lid should be kept entirely for the purpose. They should be left to soak for several hours, after which they can be carefully and thoroughly washed with a good plain soap, but no soda. After washing they should be well rinsed and dried. Napkins soiled with unhealthy motions should be specially treated. Directly they are removed from the child they should be placed in an enamel pail containing a disinfectant, as carbolic acid, two teaspoonfuls to a pint of water, or Lysol, one teaspoonful to the same quantity of water. This latter has the advantage of being perhaps more easily mixed; it has a soapy effect on the water, and also removes stains from the napkins. The diapers should soak at least an hour in the disinfectant, and then be rinsed in cold water followed

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by boiling. No diaper must be used again until boiled. In cases of epidemic summer diarrhœa, if this be neglected, infection may be spread and grave danger ensue.

The nurse after handling the napkins should never be allowed to prepare baby's bottle unless she has first thoroughly washed the hands in clean water.

6. Baby's Outings and Exercise.

The importance of fresh air both to an infant and a growing developing child cannot be over-estimated. Much more is needed than just the regulation airing, for an hour morning and afternoon either in nurse's arms or later in the perambulator. After the first three weeks the baby should be taken out on fine, sunny, warm days, and later it should be allowed to sleep out of doors, or in a room in which all the windows are open. The cot should be placed in such a position as to be out of a draught, and the perambulator screened from the direct rays of the sun. The idea of night air being harmful for infants and children is, it is to be hoped, a thing of the past. It is the night air of stuffy, ill-ventilated, close bedrooms that is so injurious, not the cool fresh air from without.

A child in warm weather should literally live in the open air, sleeping all its time during the day in a sheltered place. Rain, strong blustery cold winds, and fog are the only conditions which should modify this *régime*.

After two months the child should be taken out in the perambulator and kept in the lying position until the ninth month, when it should be allowed to

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sit up in the carriage, provided it is comfortably seated.

Besides these outings, and sleeps in the open air, the baby needs regular muscular exercise. This can be obtained, as already described, by letting it kick and throw the arms and legs about after the bath in the morning and during undressing at night. But later, at the end of the three months, when it begins to raise the head, it should be allowed further opportunity for developing this movement. A child later gains exercise by rolling and kicking on the floor. A good large rug should always be provided, so that the dust from the carpet and the direct draught from under the door are avoided.

An older child when taken out for a walk should never be over-tired; therefore it is always advisable to have the little perambulator, to be used as soon as signs of fatigue are shown.

7. The Nursery Time-Table.

The following may be a help to some mothers in making out the plan and routine of the day for a bottle-fed baby. It is given only as an outline for guidance, and would, of course, be modified to suit individual needs :—

For a Baby Three Months old or more.

6.45 a.m. Baby's bottle. Nurse's tea.

7 „ Nurse dresses. Takes baby to mother's room.

Nurse cleans the room, empties slops,
removes used napkins to bathroom.
(Cover cot while sweeping the floor.)

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8.15 a.m.	Nurse's breakfast.
9 „	Baby bathed and dressed.
9.45 „	Baby's bottle.
10.30 „	Baby dressed in hood and cloak and put in perambulator to sleep out of doors.
	Mother watches baby.
	Nurse boils bottles, and cleans every- thing connected with baby's feeding.
	Dusts the nursery. Washes out all napkins.
11.30 „	Nurse takes baby.
12.45 p.m.	Baby's bottle.
1.15 „	Baby comes in.
1.30 „	Nurse's dinner.
2 „	Baby goes out with nurse.
3.45 „	Bottle.
4.30 „	Baby comes in.
4.40 „	Nurse's tea.
5 to 6 „	Mother has baby downstairs.
6.30 „	Baby washed, undressed, and put to bed.
6.45 „	Bottle.
9.45 „	Bottle.
3 a.m.	Bottle.

CHAPTER V.—BABY FEEDING.

A. BREAST FEEDING.

Introduction.

i. *Mothers who can Nurse their Children.*

1. THE DIET.

- a. Ample.
- b. More fluids required.
- c. Composed of easily digested foods.
- d. Such as alters the milk as little as possible.

2. EXERCISE AND REST.

3. THE ACTION OF THE BOWELS.

- a. Care necessary in taking drugs.

4. CLOTHING.

5. MENTAL CONDITION.

6. THE BREASTS AND NIPPLES.

- a. Their care.
- b. Cracked sore nipples.

7. WEANING.

- a. Usual time.
- b. Causes for its postponement.
- c. Causes for early weaning.
- d. Method of its accomplishment.
- e. Precautions necessary.

ii. *Mothers who should not Nurse their Children.*

B. BOTTLE FEEDING.

1. ARTICLES REQUIRED.

2. METHOD FOR EFFICIENT CLEANSING.

- a. The bottles.
- b. The teats.
- c. Other articles.

3. PREPARATIONS FOR THE FEED.

4. HOW TO FEED BABY.

- a. Baby's position.
- b. Care of the bottle.
- c. Duration of a feed.
- d. Duties after the bottle.

5. THE TIMES OF FEEDING AND QUANTITY OF FOOD TO BE GIVEN.

6. FACTS TO BE REMEMBERED IN FEEDING A BABY.

- a. Baby's age.
- b. Baby's power of digestion.
- c. Strength of the food given.

7. SIGNS OF SUCCESSFUL FEEDING.

- a. If sufficient food is being given.
- b. If insufficient food is being given.
- c. If too much food is being given.

8. TIME-TABLE FOR BOTTLE FEEDING.

CHAPTER V.

Feeding of Baby.

“The world has no such flower in any land,
And no such pearl in any gulf the sea,
As any babe on any mother’s knee.”

Swinburne.

A. Breast Feeding.

I. Mothers who can Nurse their Children.

Although the subject of breast feeding has been touched upon in a general way under the management of children, it is such a vastly important subject that it must now be studied more in detail.

It is of vital importance to feed the young infant on the natural milk supplied for it in the mother’s breast.

The woman who can nurse her child but who *will not*, is unworthy of the name of mother. At very best, with all the modern inventions and methods, prepared food is a poor substitute for the vital, life-giving milk of the mother.

The breast milk is produced by the living cells of the organ out of the nourishment brought to them by the mother’s blood. It is absolutely pure, and perfectly free from all germs and microbes. It is adapted to the needs of the child, containing every ingredient necessary; not only that, but every ingredient is present in exactly the right proportion. Another

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fact not to be forgotten is, that it is of just the temperature required for easy digestion and assimilation.

First, there are some mothers, however, who would gladly nurse their children, but have difficulty in doing so.

Second, others have the milk, but on account of the presence of some disease or condition, should not be allowed to carry out this function.

The study of the following simple suggestions may be of value to the nursing mother :—

1. The Diet.

(a) The diet must be AMPLE, for it should be remembered that the food taken has to supply two. It should be generous, but regular in quantity and quality. Much harm is done by taking heavy meals one day, and perhaps only small ones the next. The diet of a nursing mother must be governed by common sense, and regularity above everything.

(b) THE DIET MUST CONTAIN MORE FLUID THAN USUAL.—An extra $1\frac{1}{2}$ pints of milk should be taken, if the mother can digest it. If this is difficult, then the milk may be taken alternately with gruel, bread and milk, cocoa, etc. Besides these porridge and milk, and nourishing soups are excellent. It is far better to take these nutritious foods than to add any of the many artificial preparations to the diet.

Alcohol does not improve either the quality or the quantity of the milk, and it should in all its forms be strictly avoided. The idea that porter will enrich the milk and that it should be taken at 11 a.m. and

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again at luncheon is quite a mistake. It is far better eliminated from the diet altogether. Tea and coffee are harmless if taken in moderation; they should, however, be discontinued if either produce flatulence or indigestion.

(c) THE DIET SHOULD BE COMPOSED OF EASILY DIGESTED FOODS.—Vegetables must be taken with care and moderation, as these are often the cause of digestive troubles, with consequent disturbance to the child. Green vegetables, raw fruit, and salads all come under this heading. Butchers' meat must only be used sparingly, preferably at the mid-day meal. If this article of diet is taken more often the milk becomes altered in character and too heavy and rich. If, on the other hand, the milk is poor, then a more liberal diet of fresh meat taken with discretion may do much to improve the deficiency.

(d) DIET SHOULD BE SUCH AS ALTERS THE MILK AS LITTLE AS POSSIBLE.—If the milk is suiting the child, then the diet taken must be maintained as regularly and evenly as possible. The following articles of food should be avoided, as they invariably alter the consistency of the milk:—

All highly flavoured or strongly seasoned dishes. Tough, twice-cooked game or meat. Strong coffee and tea. Excess of fresh summer fruits, uncooked vegetables, as radishes, celery, onions, etc. Alcohol in all its forms, ginger-beer, and acid drinks.

Should the milk be poor in quality but ample in quantity, or even in excess, extra fresh meat, additional cream, butter, or fats, such as boiled bacon, dripping, etc., may be eaten. Malt, or malt and cod-liver oil may be taken twice a day with advantage

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if they agree with the mother, but the effect on the child must be carefully noted.

2. Exercise and Rest.

It is of great importance to the mother to have good nights and unbroken sleep, except just at the regular intervals of feeding the infant. Besides this an hour's rest after the mid-day meal is a great advantage. She should never lie down immediately after eating, as this is apt to produce indigestion and headache.

Exercise should be as regular as the taking of meals, but must never be excessive or lead to over-fatigue. It should always be taken in the open air, and walking is by far the most beneficial form, though this may be supplemented by driving or motoring. Violent games should be avoided, such as tennis, rowing, hockey, bicycle-riding, riding and dancing.

3. The Action of the Bowels.

Special attention is required in keeping this function regular, for as extra food is being taken, it is most necessary for the system to be relieved of all its waste material. Constipation in a nursing mother always leads to constipation in the child, which may be of a very obstinate and troublesome character.

Careful additions to the mother's diet, such as cream, fats, stewed fruits, and an extra amount of fluid between meals, are much better than having recourse to drugs. Some simple aperient, however, may be necessary in spite of everything.

Liquorice powder nearly always affects the baby, causing griping, diarrhœa, and pain, while castor oil

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produces troublesome constipation after the first motion. Epsom salts and magnesia and other similar preparations all tend to lessen the amount of milk in the breasts, and if taken in large quantities may even dry it up. On the whole, it is better to give some form of cascara; this with careful regulation of the diet will probably be sufficient. Should the bowels not be relieved for twenty-four hours, a soap-and-water injection should be given, or an olive-oil enema. When this has acted it is often found that with care the bowels become regular again, and can be kept so by taking small doses of cascara.

(a) CARE NECESSARY IN TAKING DRUGS.—It may be well to mention here that the utmost care must always be shown by a nursing mother in the matter of taking of drugs, as there are practically none that do not affect the child. Drugs for allaying pain or producing sleep should never be resorted to without medical advice. Opium and morphia particularly have a most dangerous effect upon a baby.

4. Clothing.

The clothing of the mother may be that ordinarily worn, provided there is nothing tight, especially across the chest. Pressure alone is sufficient to cause a lessening of the amount of milk secreted, besides having the harmful effect of depressing the nipples, both of which conditions add so much difficulty to nursing. When the breasts are large and heavy great comfort is experienced by slinging them in a firm band of soft linen; or they may be supported by a binder, which should be about 15 inches wide and long

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enough to be wrapped around the chest, and pinned either at one side or across the middle of the body.

5. Mental Condition.

During these months of nursing the mother should lead a healthy, quiet, peaceful life, free from undue excitement, mental strain, or shock. All these factors so materially alter the character of the milk that they will produce indigestion, colic, and other troubles, to say nothing of the serious effect on the child's nervous system.

6. The Breasts and Nipples.

(a) The care of the nipples before the birth of the child has already been described. Additional precautions, however, must now be taken throughout the whole nine months of the nursing period. After every feed the nipples should be carefully washed with a saturated solution of boracic acid. This is made by dissolving a teaspoonful in a pint of hot water. It should be used warm and applied with a perfectly clean soft rag, after which the nipple and breast are dried. Before nursing this should be thoroughly washed off, for if any of the boracic is left the child may taste it and refuse to take the breast the next time.

This rule should never be broken, though after the first month or six weeks the lotion need not be so frequently used. Once in the morning and again the last thing at night will be sufficient. The nipples must be kept dry between the times of nursing. This is often easier said than done, for the milk frequently oozes if there is an abundant

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supply. In this case a clean piece of linen, on which has been placed a pad of fresh absorbent cotton-wool, carefully adjusted and fixed in position, will do much to prevent the escape of any of the fluid.

It is only by this regular care that sore, cracked nipples can be avoided, the result of neglect being inflammation of the breast with the possible development of an abscess, with its intense pain and discomfort.

(b) **CRACKED OR SORE NIPPLES.**—Prevention is the aim, but if with all care cracked nipples threaten or actually occur, prompt measures may prevent further trouble. The nipple must be bathed with boracic acid lotion and carefully dried, then painted with Friar's balsam or hazeline. The child must not be

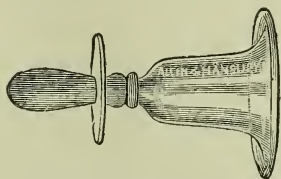


FIG. 19.—Breast Shield.



FIG. 20.—Nipple Shield, best black indiarubber.

allowed to take the nipple, and an artificial one, or nipple-shield, must be used when nursing until the crack is completely healed (Figs. 19, 20). With this care it should rapidly be all right again. But if the soreness still persists, or the breast itself becomes painful, medical advice must at once be sought.

7. Weaning.

(a) *The Usual Time.*—At the age of nine months weaning should be carried out, but if the mother is

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(e) Slow and gradual weaning is also far better for the mother. The breasts are less liable to become knotted, hard, and painful. Her diet should be restricted, especially the milk and fluids. If the breasts do become distended and painful, the milk may be gently squeezed out so as to give relief, or sometimes it becomes necessary to draw off the milk with a suction cap. In using this, however, it must always be remembered that

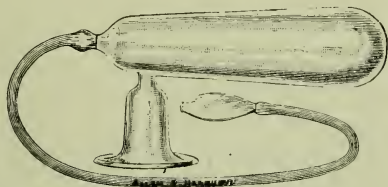


FIG. 21.—Glass Breast Reliever, for self use,
with indiarubber tube.

the glands are stimulated to again secrete the milk.

Small doses of Epsom salts must be taken three times a day. This tends to make the motions watery and so to reduce the fluid. Fomentations may also be applied, and are often a comfort when there is tenseness and pain. A binder likewise often gives a sense of relief.

The application of belladonna plasters, or painting with glycerine and belladonna should not be resorted to without medical sanction. Again, redness, the presence of knotty lumps, and excessive tension, with pain or throbbing in the breast, should immediately be reported to the doctor.

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II. Mothers who should not Nurse their Children.

The conditions which should prevent a mother from nursing her child are, amongst others, the following :—

When there is any active disease, such as tuberculosis or phthisis (consumption), which is only another name for this trouble in the lungs; or any other serious constitutional taint that may be transmitted to the child.

When any illness with high fever has been contracted which lasts for more than two or three days, as pneumonia; or any of the infectious diseases, as scarlet fever, measles, typhoid, etc.

When unfortunately an abscess in the breast may have been developed, or if the milk should be poor in quality or scanty in quantity, and is not improved by increased diet, and on which the child does not thrive.

B. Bottle Feeding.

After weaning, the baby is fed by the bottle; but, on the other hand, when a mother cannot nurse her child, then from the very commencement it has to be fed artificially.

1. The following is a List of Articles that will be required :—

Two glass boat-shaped bottles and four teats (Fig. 22).

Two bottle brushes.

One food-heater, or milk saucepan with inner saucepan.

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One gas ring, if possible, or a spirit lamp and saucepan.

One large basin in which to soak the bottles.

One teaspoon. One tablespoon.

One graduated china quart jug.

One graduated medicine glass.

Two nail brushes, with glass jar in which to keep them.

1 lb. of boracic acid powder, or bicarbonate of soda.

(a) THE BOTTLES AND (b) TEATS.—These should



FIG. 22.—Boat-shaped Feeding Bottle, with two openings.

be of a modern pattern, boat-shaped, having a wide opening at one or both ends, on to which can be fixed direct the teat and stopper.

The advantage of having a second wide opening is that it allows a full stream of water to pass through, and so secure perfect out-scouring (Fig. 23). On the other hand, it necessitates an additional rubber cap to close the opening. Nothing in the form of a valve, or screw-cap of complicated pattern should be allowed, as these are difficult to efficiently clean. A bottle with a single opening is simpler, and although a stream of water cannot run through, it can with care be thoroughly cleansed.

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The "Amater" bottle by Dr. Henson is an excellent pattern of the one-opening type (Fig 24).

The teats should be of firm indiarubber, capable

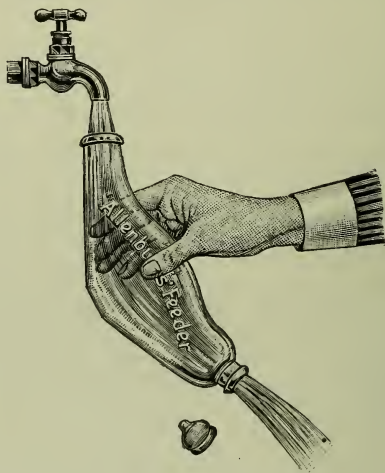


FIG. 23.—Method for Rinsing a Bottle having two openings.

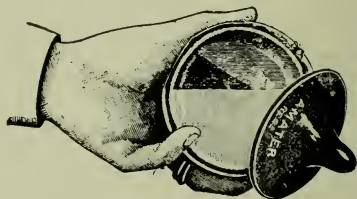


FIG. 24.—Feeding Bottle, with single opening, called the Amater.

of being easily and completely turned inside out, and unaffected by boiling.

2. Methods of Cleaning Bottles and Teats.

(a) No time should elapse between the feed and the

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washing of the bottle ; if the dregs of milk are allowed to dry in the bottle or teat, thorough cleansing is far more difficult to accomplish. Directly the baby has finished, the bottle should be immediately placed in a basin full of water provided for the purpose. There it may safely remain until the nurse has more time to see to it later. It should be washed in hot water, free use of the bottle brush being made, and then rinsed. After which the bottle, together with the teat, should be placed in a basin full of water, in which has been dissolved boracic acid, one teaspoonful to the pint.

The bottles should be boiled once a week ; this must be done carefully, if not, cracks will result. No cracked bottle must ever be used. In boiling a bottle it should not rest on the bottom of the saucepan, but be separated from it by a little frame of wood or pad of clean linen. The water should be almost cold, and gently heated up to the boil, so that the bottle and water heat together, and they should be kept at boiling-point at least ten minutes. When cool enough the bottle is removed and kept in the basin under water and boracic until it is next required.

(b) The teats need to be boiled about twice a week. But after every feed they must be turned inside out, and scrubbed in hot water, and then left to soak in boracic and water. When a teat is boiled it should be dropped directly into boiling water and left in for two minutes only. If allowed to remain longer the indiarubber rapidly perishes.

(c) All jugs, bottles, in fact everything used in connection with bottle feeding, must be kept

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scrupulously clean. All jugs must be scalded before and after use, also all bottle-brushes.

Bottles and teats must be re-rinsed just before use. It is only by these means that the baby can be kept in health, and free from attacks of diarrhœa.

The nail brushes which are used for scrubbing the bottles and jugs should be kept soaking in a strong solution of boracic, and never be allowed to lie about in the air.

3. Preparations for the Feed.

The bottle containing the food should be carefully warmed by either standing it in the food-warmer or in a saucepan of hot water. The whole contents of the bottle should be heated equally. The best way of testing the heat is to let fall a few drops through the teat on to the back of the hand (never the palm); it should then feel just warm. It is of no use to think that the temperature can be gauged by grasping the bottle in the hand, as the outer layer of milk always becomes heated before the rest. Again, the nurse should never be allowed to suck the teat first to ascertain the heat. This, unfortunately, is a commoner practice than might be imagined.

If the milk is heated in an open saucepan and then poured into the bottle, on no account, either, must it be cooled by blowing upon it!

Be sure that the milk can escape from the teat; this can easily be ascertained by inverting the bottle, the milk should then gradually form large drops, and never pass out in a continuous stream.

Feeding of Baby.

4. How to Feed Baby.

The baby should be on the mother's or nurse's lap, half lying down in the arm, kept warm by being wrapped in a blanket or shawl. Warmth during feeding is very necessary, and greatly aids digestion. The bottle must be held by the hand, and should never be laid down either in the cot or in the perambulator, where the child is often fed after the first few months. The omission of this little precaution leads to a vigorous child taking the food much too quickly, and, on the other hand, a weakly baby is liable to fall asleep, leaving the milk unfinished. The bottle being held in the hand also keeps the milk up to the level of the teat, and so prevents the suction of air into the baby's stomach, which is such a fruitful cause of flatulence.

The child should spend from fifteen to twenty minutes over a bottle, being carefully watched all the time. If the food is taken too hurriedly, or gulped down, then the teat must be removed from the mouth at intervals, and it may even be a good thing at the next feed to use a different teat having smaller holes.

After feeding, the diaper must be examined and changed if at all damp with as little movement as possible; then the child should be laid down in the cot or perambulator and allowed to sleep as long as it can, or until the next feed is due. No young infant, after a meal, should ever be played with, taken down to be admired by friends, or kept in the sitting position on the nurse's arm; it should be gently laid on its side, kept quiet, and allowed to fall asleep.

Mother and Baby.

5. The Times of Feeding and Quantity of Food to be given.

As has already been said, feeding *must* be carried out at regular intervals, the length of the interval depending to a great extent upon the age of the child, but also upon its digestive power and general development.

If the child is weakly and not getting on very well, and is liable to indigestion and flatulence, it is better to give the food weaker and more frequently. A tabulated form may, perhaps, give a clearer idea of the times, intervals, and amounts of food which should be given to the average child. No table, however, can hold good in every case; it can only serve as a general guide to the mother.

6. Facts to be Remembered in Feeding a Baby.

First, the Age of the child must always be taken into consideration.

Secondly, its Powers of Digestion.—This may be judged by the effect produced after food, and whether indigestion, sickness, or flatulence are present, or if the motions are abnormal and contain undigested curd of milk, or are green in colour and offensive in smell.

Thirdly, the Strength of the Food given.

7. Signs of Successful Feeding.

If Sufficient Food is being Given, the baby is comfortable and satisfied, it is quite content to let the bottle be taken away and does not cry or gaze after it; the

Feeding of Baby.

weight steadily increases week by week, the general development of the child is satisfactory, and the muscles feel firm and healthy.

If the Food given is Insufficient, then the baby is fretful and restless and cries when the bottle is removed, although there are no signs of indigestion or sickness. The weight remains stationary, or frequently falls; the general development of the child is unsatisfactory, the muscles become flabby, and the skin wrinkled and loose.

If the Food given is Too Much, signs of indigestion, with flatulence and vomiting, are present—some of the milk is frequently brought back directly it has been swallowed unaltered in appearance. Diarrhœa may result, and the motions contain undigested particles of milk; the weight is usually at a standstill, or there may even be a loss.

An over-filled stomach loses much of its power of digestion owing to its stretched condition. This prevents the muscles of the organ carrying out their churning action efficiently, owing to loss of elasticity.

In the chart given on p. 116, periods of three months have been taken, but the amount of food given and the increased length of interval must, of course, be altered gradually, and not suddenly as the table seems to indicate.

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TIME-TABLE FOR BOTTLE FEEDING.

Age.	Number of Bottles in 24 Hours.	Quantity at a Feed.	Interval Between Feeds.	Quantity in 24 Hours.	Number of Feeds at Night.	Hours for Feeding.							
						A.M.				P.M.			
													A.M.
1 to 3 days .	4 or 5	Oz. 1 to $1\frac{1}{2}$	Hours. 4 to 6	Oz. 6	1	6	—	—	—	—	—	—	—
3 days to 4 weeks	10	$1\frac{1}{2}$ to $2\frac{1}{2}$	2	15 to 25	1	6	8	10	12 noon	2	4	6	8 11
1 to 3 months .	9 or 8	$2\frac{1}{2}$ to 4	$2\frac{1}{2}$	20 to 32	1	6	8.30	11	—	1.30	4	6.30	9 11.30
3 to 6 months .	8 or 7	4 to 7	3	32 to 49	—	6	9	—	12	—	3	6	9 11.30
6 to 9 months .	7 or 6	7 to 8	$3\frac{1}{2}$	42 to 49	—	6	9	—	12	—	3	6	9 11.30
9 to 12 months .	6	8 to 9	$3\frac{1}{2}$ to 4	48 to 54	—	6	9.30	—	—	1	4	7	— 10

CHAPTER VI.

i. *Cow's Milk and how to prepare it for the Baby's Bottle.*

1. COW'S MILK.

- a. Chief characteristics.
- b. Essential differences from Mother's milk.

2. STERILISATION OF MILK.

- a. Prolonged heating.
- b. Scalding.
 - i. Saucepan, or direct boiling.
 - ii. Milk saucepan, indirect boiling.
 - iii. In bottles.

3. OTHER INGREDIENTS OF BABY'S BOTTLE.

- a. Milk-sugar.
- b. Cream or fats.
 - Yolk of an egg.
 - Cod-liver oil.
- c. Barley-water.
- d. Whey.
- e. Albumen water or white-of-egg water.
- f. Lime-water.
- g. Patent foods.
 - Condensed milk.

4. TABLES FOR PREPARING BABY'S BOTTLE.

- Without cream.
- With cream.

ii. *Feeding after the First Year.*

iii. *Fads.*

1. IN DIET.

2. IN CLOTHING.

CHAPTER VI.

I. Cow's Milk and how to prepare it for the Baby's Bottle.

“Just so much food and drink should be taken as will restore our powers, not so much as will oppress them.”—*Cicero*.

1. Cow's Milk.

At best cow's milk, even with careful preparation, cannot be made to resemble human milk, and this must always be remembered in making use of it for the diet of a baby.

The following table will show the *chief characteristics* of the two milks, and their *essential differences* will be seen at a glance:—

—	Human Milk.	Cow's Milk.
Fats (Cream) . . .	$3\frac{1}{2}$ to 4 %	4 %
Proteids or Flesh-forming Ingredients	1 to $1\frac{1}{2}$ %	$3\frac{1}{2}$ to 4 %
Milk-sugar . . .	$6\frac{1}{2}$ to 7 %	4 to 5 %
Water . . .	87 to 88 %	86 to 87 %
Reaction . . .	Alkaline.	Acid.
Curd . . .	Light, flaky, and easily digested.	Solid, close and firm, difficult to digest.
Bacteria . . .	Absent, passes direct from mother to child.	Contains dirt and germs owing to transit.
	Fresh.	Often sour.
	It is a living fluid of the right temperature for the baby.	First cooled down, then heated for sterilisation, again warmed for the bottle.

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Cow's milk contains (1) nearly a double quantity of proteids or flesh-forming ingredients, and therefore has to be freely diluted with water.

(2) There is also too small an amount of sugar, so that an extra quantity of milk-sugar must be added.

(3) Although both milks contain much about the same amount of cream, by the time the cow's milk has been diluted to make the proteids of the right proportion, it has become so poor in fats that it is essential that cream or some digestible form of fat should be added.

(4) The curd is much too firm, solid and indigestible, and it is by no means easy to modify this without at the same time diluting the milk still further.

Thus it will be seen that, with every care in altering the cow's milk, it still remains an unnatural food for the baby, and it is only by the slow and gradual process of education and training that the digestive organs can deal with this diet.

It is, therefore, of great importance in artificially feeding a child to begin with the feeds weaker than those which its age would apparently justify.

Water, of course, is most frequently used in preparing the milk, but as the other constituents of the milk are also diluted by this process it is necessary to add further ingredients, otherwise there would be a serious loss in the weight of the child. This is specially the case in infants between two and three months of age, for the stomach is not able to stand the cow's milk as strong as is required. By adding a stronger proportion of this milk to try and overcome

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the loss, the child's digestion is upset, with the inevitable result of a further loss of weight. The best way to overcome this difficulty is to dilute the milk with albumen water made from white of egg, or with whey. These are both rich in flesh-forming ingredients and also tend to break up the curd, so by the careful selection of one or the other for admixture with the milk, indigestion is avoided and a gain in weight often obtained.

There is one point in the natural breast milk that has been already alluded to, which cannot be imitated in artificial feeding: the mother's reaches its full strength about the end of the third or fourth week, and remains practically the same in quality throughout the nursing period; in quantity it regularly increases. It is impossible to follow this in bottle-fed babies, as their digestion cannot stand the strength of milk required. It is only by slow degrees that the feeds can be increased, and not until the end of twelve months or more can a child take pure undiluted cow's milk.

The only sure guide as to how quickly the milk may be increased is by watching the effect on the child, its digestion, the resulting motions, and the weekly alteration in the body weight.

The milk which is used must be absolutely fresh; it should be delivered twice a day from the dairy, in sealed bottles, so as to prevent exposure to the air and consequent contamination. There is no reason why milk from one cow should always be used; in fact, it is far better to use that from several cows freely mixed together. This gives a much more uniform character to the milk. The notice "Separate

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cows kept for invalids and babies " is often seen, but this, as a matter of fact, does not give the advantage it appears to bestow.

The question of heating or boiling the milk before use is one of great difficulty. Milk that has been boiled is never the same afterwards as before. The living cells are destroyed, the composition of the milk is altered, and changes occur in its delicate constituents which materially alter its usefulness. It loses some of its nutritive properties and becomes less easy of digestion. Instead of being a living, vital food as in the case of breast milk, a dead, sterilised fluid is substituted.

On the other hand, milk is such a fruitful source of the spread of disease by the germs that contaminate it during handling, from the time it leaves the cow till it has reached the baby's bottle, that there can be no two thoughts as to the advisability of boiling it.

2. The Sterilisation of Milk.

(a) This process is carried out by a number of dairies on a large scale ; it is difficult to do at home without the proper appliances, and should it be necessary for the child to take this form of milk for a little while, it is better to buy it direct in sealed bottles, ready labelled as having been sterilised.

The milk is modified to a great extent by this process, and is rendered less nutritious, and the child if kept on it for long is liable to certain troubles, such as tiresome constipation, rickets, and scurvy. On the other hand, there is the great advantage of knowing that all harmful germs are killed, together with their spores.

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(b) A SECOND METHOD IS THAT OF SCALDING THE MILK.—This may be conveniently employed at home, as being much more simple and quickly accomplished. It has again the disadvantage of altering the milk, but in a lesser degree than that which occurs in sterilisation. The milk becomes less digestible, it loses some of its nutritive properties, and its composition is altered. The germs that are present are killed, but their spores escape unaffected, so that this method is not so safe as the previous one. There are three methods by which scalding can be carried out.

1st Method.—Heat the milk direct in a saucepan up to the boiling point, and allow it to boil for five minutes.

2nd Method.—Heat the milk in a double saucepan for ten minutes. This has the great advantage over the first method in that the milk cannot be burnt.

3rd Method is similar to that employed for bottling fresh fruit. Place several wide-mouthed glass bottles partially filled with milk and plugged with cotton-wool into a large-sized saucepan containing cold water. The bottles must not stand on the bottom of the saucepan but on a folded cloth, or should be packed round with hay. The saucepan must be uncovered, and as the water boils away more boiling water should be added. When the milk reaches the boiling point it should be kept at this temperature for ten minutes. Afterwards the milk should be cooled down gently, the cotton-wool plug not being removed until the milk is required.

If the other methods are used, the milk must be poured from the saucepan into a perfectly clean,

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scalded jug. This jug should then be placed in a fairly deep basin of cold water and covered over with two or three layers of butter muslin (the same piece must not be used for a second day); the ends of this must dip into the water, so that the whole is kept moist; the basin should be stood in the draught of a partially opened window, away from the nursery, and not near any drains, sinks or lavatories.

No milk which has been prepared by any one of these methods mentioned, must ever be allowed to stand over for the next day. In hot weather great care should be taken in seeing that the milk is perfectly fresh when delivered, and also when it is to be used. If there is a suspicion of its being sour, it must at once be excluded from baby's diet.

If hot weather is accompanied by the presence of infantile diarrhoea (of whatever type), too much care cannot possibly be taken in preparing the milk, and it is well to make the rule that it is to be boiled (by whichever method employed) exactly double the ordinary time.

Should a fly happen somehow to get into the milk, again the whole amount must be rejected, and never be used for a baby. Thus it will be seen how all important it is to keep the milk covered.

3. Other Ingredients of Baby's Bottle.

In preparing all bottles, as has been mentioned, sugar must be added.

(a) MILK-SUGAR is the variety that should always be used, and not the ordinary cane or loaf sugar. Milk-sugar is much more easily digested and is less liable to produce flatulence.

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If cane sugar is used only one-third of the amount mentioned in the tables should be added to the milk.

Broadly speaking, it is correct to say that half a teaspoonful of milk-sugar should be mixed with every two tablespoonfuls (1 oz.) of milk.

(b) CREAM OR FATS.—By the time the cow's milk has been diluted to the right proportions it has become very deficient in cream, therefore some form of fat must be added. If condensed milk or patent foods are used the same thing is necessary.

It is far better to use *cream*, though in some cases the cost may make it prohibitive. That used should preferably be hand-skimmed, and this can generally be obtained from good dairies if specially ordered. When this is not procurable, then the separated cream must be employed, but the very thick variety sold in special pots should be avoided. It is too heavy, and contains preservatives which are injurious to the child. Great care must be taken that the cream is absolutely sweet.

If hand-skimmed cream is used, twice the amount mentioned in the tables must be added.

Scalding of Cream.—This can be done if necessary before use. It should be placed in a jug, which stands inside a saucepan of water, and be kept stirring both during heating and cooling. If this is not done it becomes thick and lumpy.

YOLK OF AN EGG.—Another way of giving fat to the milk is by adding the yolk of an egg. This should be separated from the white, and well stirred but not beaten up. One egg is sufficient for the whole day.

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COD-LIVER OIL.—This is another method: ten drops of cod-liver oil should be added to the bottle, or half a teaspoonful given twice or three times a day after a feed, according to the age of the child.

In whatever form fat is given, it is important to watch the effects on the baby. If the motions become loose, or greasy and offensive, with reddening of the buttocks, this is a sure indication that either there is too much fat, or else it is in an unsuitable form.

(c) BARLEY-WATER.—Barley-water is often used to dilute the cow's milk instead of ordinary boiled water, and it also helps to alter the curd, making it softer and lighter. This addition is also useful if the child is troubled with scalding on passing its water. Cow's milk is acid instead of being alkaline, and this often leads to the urine becoming excessively acid, which is the cause of this scalding. There is one disadvantage in adding barley-water to the milk, that is, the introduction of starch to the food, which is entirely absent from milk. But with care this will not hurt the baby, though the results must be carefully observed.

The Preparation of Barley-water.—The best way to prepare barley-water is to take a tablespoonful of well-washed pearl barley, add a pint of cold water, and allow it to boil slowly until two-thirds of a pint are left. Then strain to remove any thickness that may be present, after which it is ready for use.

If, however, it is made from "Prepared Barley," a tablespoonful should be mixed with cold water until a thick cream is formed. A pint of boiling water

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should be added, after which it must again be boiled for five minutes, stirring all the time.

(d) **WHEY.**—This is one of the most valuable additions to the food, or it may be used to dilute the milk instead of barley-water. If it is employed, then the cream does not require to be added, and only half the milk-sugar; the whey properly prepared contains not only the whey-proteid or flesh-forming ingredient, but also the fat, milk-sugar, and water of the milk. In fact, whey is so nutritious that, in cases of indigestion and vomiting where the cow's milk, even diluted, does not seem to suit, it is quite sufficient alone for the child's needs.

The Preparation of Whey.—It is advisable to prepare the whole amount required for twenty-four hours at one time so as to save trouble, as the process takes both time and care.

One teaspoonful of rennet must be added to 1 pint of fresh milk. Heat to a temperature of 100° F. Stir with a wooden spoon all the time while the curd is forming to assist the cream to separate. Be sure not to over heat. When the curd has fully formed press it firmly down, and squeeze out the whey as much as possible. Strain this off as it forms through butter muslin into a milk saucepan, and heat until the whey reaches 160° F., which prevents all further action of the rennet. About 12 oz. of whey can be obtained from 20 oz. (1 pint) of milk.

(e) **ALBUMEN WATER, OR WHITE-OF-EGG WATER.**—This may be added to the food, or again in cases where there is severe indigestion it may be necessary to give this alone for twenty-four hours. After

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which whey may be substituted, and milk added as the child improves.

Preparation of Albumen Water.—Boiling water must not be used in preparing this, for the simple reason that it will coagulate the white of the egg, rendering it a solid mass, perfectly unfit for baby's use.

Take the white of a fresh egg, and add to it a breakfast cup (half a pint) of cold water. Mix thoroughly by stirring, then strain through butter muslin and add a little milk-sugar.

(f) LIME-WATER.—This is a very useful and helpful addition to the bottle in some cases. It helps to soften and alter the hard curd of cow's milk, and in instances where this has produced indigestion and sickness, it is often found of great value. It can never be used to simply dilute the milk as ordinary water, barley-water, or whey, but must be added in small quantities only, as it has a very constipating effect. Two teaspoonfuls to each bottle is ample, though this may be increased to a tablespoonful if necessary.

Note.—*Lime-water* should never be added to the food before it is heated, but always just before the bottle is given to baby, as it is spoiled by heating, and loses all its valuable properties.

(g) THE ADDITION OF PATENT FOODS.—Dried milk preparations or patent foods should never be allowed to take the place of fresh milk in baby's diet, though later it may be found advisable to add one to the bottle.

There is one great drawback to all of them. In process of manufacture all are exposed to such a degree of heat that, though they are rendered sterile,

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their vital properties are so altered and diminished that they become more or less useless, and even harmful if given alone. A child brought up exclusively on one of these foods nearly always suffers from rickets or scurvy.

Another drawback is the presence of starch in most of these preparations, an element which is foreign to human and cow's milk. Until the fifth or sixth month there is nothing in the child's digestive fluids that can prepare this substance for assimilation, hence the frequent attacks of indigestion, vomiting, and unhealthy motions which often supervene on the addition of a patent food to the young baby's bottle.

Great care, therefore, must be shown in the selection of a food, if it becomes necessary to put a very young infant on to so artificial a diet. It is wiser, if possible, not to begin any such addition until the eighth or ninth month has been reached.

The bottle should then be made up with ordinary boiled water, barley-water being no longer necessary.

Condensed Milk is useful for a short time, when, for instance, the child cannot take cow's milk in hot weather. When a baby is getting over an attack of diarrhoea, it is often wiser after albumen water and whey alone have been given, to begin the addition of milk to the bottle in this form, and then gradually get on to cow's milk. To make condensed milk resemble cow's milk as nearly as possible, one part should be added to two parts of water, and then diluted again as is required by the age and condition of the child.

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TABLE FOR PREPARING BABY'S FOOD.

Without Cream.

Age.	1st to 3rd Day	3rd Day to 4th Week.	1st to 3rd Month.	3rd to 6th Month.	6th to 8th Month.	8th Month to 1 Year.
Cow's Milk .	2 teaspoonfuls.	3 to 5 $\frac{1}{2}$ teaspoonfuls.	2 $\frac{1}{2}$ to 3 teaspoonfuls.	5 to 8 teaspoonfuls.	9 to 11 teaspoonfuls.	13 teaspoonfuls.
Milk-sugar .	$\frac{3}{4}$ teaspoonful.	$\frac{3}{4}$ teaspoonful.	1 $\frac{1}{2}$ teaspoonfuls.	2 to 2 $\frac{1}{2}$ teaspoonfuls.	2 $\frac{1}{2}$ teaspoonfuls.	3 teaspoonfuls.
Barley-water .	Up to 3 teaspoonfuls.	Up to 3 to 5 teaspoonfuls.	Up to 7 to 8 teaspoonfuls.	Up to 10 to 14 teaspoonfuls.	Up to 14 to 16 teaspoonfuls.	Food, 3 teaspoonfuls to 1 tablespoonful. Water, 18 teaspoonfuls.
	1 $\frac{1}{2}$ oz.	1 $\frac{1}{2}$ to 2 $\frac{1}{2}$ oz.	3 $\frac{1}{2}$ to 4 oz.	5 to 7 oz.	7 to 8 oz.	9 oz.

With Cream.

Age.	1st to 3rd Day.	3rd Day to 4th Week.	1st to 3rd Month.	3rd to 6th Month.	6th to 8th Month.	8th Month to 1 Year.
Cow's Milk .	2 teaspoonfuls.	2 $\frac{1}{4}$ teaspoonfuls to 1 tablespoonful.	2 to 2 $\frac{1}{2}$ teaspoonfuls.	4 $\frac{1}{2}$ to 6 $\frac{1}{2}$ teaspoonfuls.	8 to 10 $\frac{1}{2}$ teaspoonfuls.	12 $\frac{1}{2}$ teaspoonfuls.
Cream . .	—	$\frac{1}{2}$ to 1 teaspoonful.	1 $\frac{1}{2}$ to 2 teaspoonfuls.	2 to 3 teaspoonfuls.	3 teaspoonfuls.	3 $\frac{1}{2}$ teaspoonfuls.
Milk-sugar .	$\frac{3}{4}$ teaspoonful.	$\frac{3}{4}$ teaspoonful.	1 $\frac{1}{2}$ teaspoonfuls.	2 to 2 $\frac{1}{2}$ teaspoonfuls.	2 $\frac{1}{2}$ teaspoonfuls.	Food, 3 to 4 teaspoonfuls.
Barley-water .	Up to 3 teaspoonfuls.	Up to 3 to 5 teaspoonfuls.	Up to 7 to 8 teaspoonfuls.	Up to 10 to 14 teaspoonfuls.	Up to 14 to 16 teaspoonfuls.	2 $\frac{1}{2}$ teaspoonfuls. Up to 18 teaspoonfuls.
	1 $\frac{1}{2}$ oz.	1 $\frac{1}{2}$ to 2 $\frac{1}{2}$ oz.	3 $\frac{1}{2}$ to 4 oz.	5 to 7 oz.	7 to 8 oz.	9 oz.

How to Prepare Cow's Milk.

II. Feeding after the First Year.

The change from the bottle to the more ordinary food of an older child must always be made with care, and carried out gradually.

A crust of stale bread may be given occasionally for the child to chew, but this must be carefully supervised, so that sodden lumps are not swallowed.

During the second year milk ought still to form the staple diet; but gravy, broths, both mutton and chicken, and eggs must be included; also bread and other starch-containing foods, though these latter must never be given in excess. Extra cream or fats are of value, and should not be forgotten.

Fluids are essential, and drinking water between meals may be allowed.

The meals must be given regularly and punctually, and should be eaten slowly but without dawdling.

The child from the very first should be encouraged to chew its food; but this must not be relied upon for a long time, hence the great importance of cutting up and preparing the meals beforehand.

At the beginning of the second year the child should have five meals a day, three or four of which should include warm milk, and one, meat gravy or both. The yolk of an egg may be added to the milk once a day—or half a one twice a day.

Fruit or fruit juice is often greatly appreciated, and can as a rule be safely taken after the first nine or ten months, but later a larger quantity may be given. The safest fresh fruits for the nursery are grapes and oranges, provided the skin and pips are removed, bananas, and baked apples.

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At the end of the eighteenth month, four meals should be ample, though extra milk in the evening may be necessary. Oatmeal, bread and milk, bread and butter, eggs, puddings, gravy and meat, should all find a place in the nursery meals from time to time, as variety is most important.

III. Fads.

1. In Diet.

This is undoubtedly an age of fads and fancies, but in dealing with the question of the care of young children, a mother will be well advised to leave all such caprices severely alone, and let her decisions as to clothing and diet be influenced by sober common sense.

A fad which, in most cases, is very dangerous is that of "sour-milk diet." It may be, and is, useful in certain diseases, administered under strict medical supervision, but it ought never to be allowed as a sole diet or as a routine thing.

Again, in older children the fad of "Patent Foods" is an all too common one. Instead of giving a child a healthy, nutritious natural diet, so-called "foods" are added, and so-called "nerve-forming powders" are sprinkled into the gravy or milk.

The addition of these adulterations is an admission that the food given is at fault. A really nutritious, mixed diet should be the object in view, and the child will then get on far better than by using any of the quack preparations.

Another fad is the exclusion from the diet of all meat. The developing, growing child needs meat and fish, etc., for it is impossible that it can digest sufficient bone and tissue-forming ingredients from

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the amount of vegetable food taken. Unless animal food is included in the diet, the child is deprived of what is necessary, slow starvation occurs, with the result that the blood becomes impoverished, and anæmia and loss of nerve power supervene. Lassitude, general debility, and ill-health frequently result, and with the lowered vitality, tuberculosis in one of its many forms, is all too likely to make its appearance.

2. In Clothing.

In a few instances adults can stand crazes, but in children the seeds of untold and permanent harm are often sown, especially in delicate ones, when fads are adopted with the idea of "hardening them."

It must always be remembered that what may be suitable and even desirable in a warm climate is by no means to be advocated for children's wear in the cold, damp, wintry weather so often experienced in these islands.

Bare feet and legs, no hats, insufficient clothing are one and all to be seen on the little victims of the "fad craze," and small legs, blue with cold, covered with town dust or mud, bear silent record to a perhaps well-meaning but thoughtless mother.

On the other hand, coddling, over-heated rooms and too much wrapping-up, must equally be avoided.

A good mother who has her child's welfare really at heart will choose a sensible middle course.

The recent fad of short-coating a child at the end of the third week of its little life is to be utterly condemned, as well as the more misguided practice of taking an infant into the open air before it is 24 hours old.

CHAPTER VII.—BABY'S TROUBLES.

- I. CRYING.
- II. INDIGESTION WITH COLIC.
- III. VOMITING AND FLATULENCE.
 - a.* Breast-fed babies.
 - b.* Bottle-fed babies.
- IV. DIARRHŒA.
 - a.* Breast-fed babies.
 - b.* Bottle-fed babies.
- V. CONSTIPATION.
 - Remedies never to be used.
- VI. PROLAPSE OF THE BOWEL.
- VII. SUDDEN TWISTING OF THE BOWEL.
- VIII. UMBILICAL HERNIA OR PROTRUSION OF THE BOWEL.
- IX. SORE RED BUTTOCKS.
- X. THRUSH OR SORE WHITE MOUTH.
- XI. TEETHING OR DENTITION.
 - a.* Date of eruption of teeth.
 - b.* Care of the teeth.
- XII. CONVULSIONS.
- XIII. TONGUE-TIE.
- XIV. ENLARGEMENT OF THE BREASTS.
- XV. ROSE RASH OR GUM RASH.
- XVI. VACCINATION.
 - a.* General disturbance.
 - b.* Local trouble.
- XVII. CROUP.
- XVIII. CHILL OR FEVERISH ATTACK.
- XIX. EARACHE.

CHAPTER VII.

Baby's Troubles.

“Sickness and sorrows come and go.”—*Robert Burton*, 1576.

With all the care in the world baby is sure to have some little troubles and ailments. It is very important to know how to recognise these and understand some of the simple remedies that may be adopted. A great deal of discomfort to the child, and certainly much anxiety to the mother, may thus be saved.

The first condition that must be considered is that of crying.

1. Crying.

This is perfectly natural to a child, but when in excess or persistent, clearly shows that something is wrong somewhere.

The first sound that escapes a baby after its birth is its cry, and it is that which the doctor and nurse desire to hear more than anything else. It is only by vigorous crying that a new-born baby is able to fill its lungs with air. Up to this time respiration has been maintained through the circulation of the mother, but now as the little one is beginning an independent existence it is all important that the lungs should be well expanded.

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After this first effort, if the baby is healthy and contented, crying should be the exception and not the rule.

As a child cannot speak it is very important to be able to intelligently and rapidly interpret its wants as indicated by its little cry. The character of the cry can early be distinguished, as to whether the child is hungry, screaming from passion, or because it wants to be picked up and nursed. Again, it may be sobbing in a lonely, pitiful little way that only a mother knows how to comfort.

CAUSES.—A child may cry when lying in its cot, simply *because it is cold*. This is frequently the reason of restlessness. A hot bottle well covered with flannel will prevent the recurrence of this fit of crying. Damp napkins are another source of wakefulness; directly these are removed, and the child is made warm, dry and comfortable, it soon becomes quiet and falls off into a peaceful sleep.

The child may be too hot, the bed-clothes too heavy, or the air of the bedroom close and stuffy. These drawbacks are cured by having light, warm clothes for the cot, and a well-ventilated room.

Thirst is another simple cause of crying. If only it could be understood that a child needs little drinks of water besides its food during the day, many attacks of persistent crying would be allayed or prevented.

The child may be hungry, but unless it is the proper time for a bottle, it is better to try and find some other reason for the fretfulness. It is not often that a properly and regularly fed baby cries on this account.

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Crying is also associated with more urgent troubles,
such as :—

Indigestion with flatulence, sickness and colic.

Constipation or diarrhœa.

Thrush or soreness of the mouth.

Irritation and pain from soreness of the buttocks.

Difficulty in passing the water or some abnormal condition of the urine.

Dentition.

Rickets and other diseases.

2. Indigestion with Colic.

SIGNS.—The child is restless, fretful, and crying. The tongue is furred, and on examining the abdomen it is found hard, tense, and distended. The legs are drawn up, only being relaxed at intervals, to be drawn up again with the recurrence of pain. This is often accompanied by screaming and kicking. There is a good deal of wind (flatulence) and frequently hiccough. The motions are offensive and green in colour, and diarrhœa is often present, although, on the other hand, there may be constipation.

Great care in these cases should be taken to find out the error in the food, and to immediately correct it. Perhaps a weaker food given more slowly, or possibly in smaller quantities at more frequent intervals may be necessary.

In breast-fed babies more care must be observed by the mother in the regulation of her own diet, or by curtailing the meat that she may be taking. When the monthly periods return, the milk is altered and is apt at first to upset the child, so that extra care at these times must be exercised.

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TREATMENT OF THE CHILD.—Colic with crying and screaming should be treated at once and never be allowed to continue. Loosen the binder and apply hot flannels or a hot-water bottle to the stomach. Change of position by letting the child lie over on its face, or gentle rubbing of the stomach, may give relief. A teaspoonful or two of dill water with two or three drops of sal volatile is often beneficial.

Should, however, the attack go on, it may be necessary to get the bowels opened by giving a small injection of warm water (no soap), and a dose of castor oil.

The dose should be half a teaspoonful up to the age of six months, and one teaspoonful up to the age of one year.

Should attacks often recur, or after every meal, medical advice should be sought without delay.

3. Vomiting and Flatulence.

Vomiting in young children is very much more common than in adults, and takes place without any straining or retching. It is not unusual for a child to return a mouthful of its food unaltered, directly after having been fed. If, however, this persists to any large extent it points to the fact that too much food has been given at a time, that it has been taken too quickly, or that the child has been moved too soon afterwards. *The cause* of this early vomiting may be some slight error in the strength of the food. This can generally be remedied by careful attention. Sickness, however, may be of a much more serious nature, therefore no case in which it is present should be neglected or passed over as being unimportant.

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SYMPTOMS.—Sickness may occur some time after the food has been given; in this case the milk is changed and curdled, and has also a distinctly sour smell; the motions become altered and frequently contain little bits of white undigested curd.

The child seems uneasy after food, and is restless, frequently crying as if in pain; after the sickness it may be easier, and even go to sleep. Wasting and loss of weight are not uncommon, and, if the attack is prolonged, may be considerable.

TREATMENT.—In breast-fed babies special care must be taken in regulating the interval between the times of feeding, and the rate of feeding must be diminished. There is one detail which if observed may almost at once cause an immediate cessation of the trouble. Just before the baby is fed the first teaspoonful or two of milk should be drawn off from the breast and thrown away. This is always richer in fat than the rest of the milk, and it may be this extra richness which is upsetting the child's stomach.

In bottle-fed babies, the food may be too rich in cream, or the milk mixed in too large a proportion; in this case a weaker bottle must be tried.

If this is not enough, then the child should have two teaspoonfuls of dill water before feeding, or the same amount of lime-water may be added to the milk. Barley-water in these cases is not to be recommended, as it contains a good deal of starch.

One other method may be tried: the child should have no milk of any description for twelve or twenty-four hours, but be fed on white-of-egg water or whey, to which has been added a little sugar. If this treatment has to be adopted in a breast-fed baby, it must

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not be forgotten that the breasts, unless the milk is drawn off, become tense and painful, and cause the mother great discomfort.

4. Diarrhœa.

Diarrhœa in any form should never be neglected or considered as unimportant. Medical aid cannot be called in too soon, as early treatment is the secret of success. Diarrhœa is, as it were, a danger signal to the mother that something is wrong.

THE SYMPTOMS.—The child passes five, six or more motions a day, which vary in character. They may be green, slimy and offensive, the buttocks soon becoming red and sore. The child is very fretful and restless and continually crying. It is evidently in pain, and lies with the legs drawn up. . The face becomes drawn and looks wasted, and there is loss of weight. If the diarrhœa has gone on for any time the anterior fontanelle becomes depressed instead of slightly bulging.

THE CAUSES are many, just as they are many in cases of vomiting; in fact, that which produces sickness usually causes diarrhœa too, this being only another manifestation of the same trouble. Too frequent feeding, with the interval between the bottles being too short to allow of full digestion. Too rapid feeding, when the milk is undigested, and passing into the bowel causes irritation and consequent diarrhœa.

In breast-fed babies the causes may lie in the mother; her diet may be unsuitable or contain some indigestible ingredient. Insufficient exercise, the taking of strong aperients, severe mental shock, emotion, or excitement, the return of her monthly periods, or her again becoming pregnant, all tend to

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alter the milk and thus produce diarrhœa in the baby. If due to one of these, the diarrhœa may be cured by correcting the cause, if this is possible, or stopping the breast feeding for a few hours.

The Causes in bottle-fed Babies are many.—Irregular feeding, improper mixing of the milk, the inclusion of some ingredient that the stomach is unable to digest, such as starch. The milk may not be fresh, or may have been mixed with stale milk from the previous delivery. The bottle and teats may have been improperly washed.

TREATMENT.—Give a dose of castor oil to get rid of anything that is causing the intestinal irritation. Keep the child very warm.

Stop all milk feeding for twenty-four hours, and give white of egg or whey instead. Raw meat juice may be necessary, but this should never be given without medical orders.

Great care must be taken in re-starting the milk, and if there is any return of the diarrhœa, the bottle must again be suspended.

A more modern treatment, which in some cases has been of the utmost value, is the injection under the skin of pure sea-water in large quantities. This treatment can only be carried out by a doctor thoroughly conversant with the method. In some apparently hopeless cases, the child has been revived and brought back to life and health. Hope should *never* be abandoned until this method has been tried.

5. Constipation.

Perhaps regularity from the very beginning of life has more to do with the formation of a good habit

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than is possible to estimate. Regular action of the bowels every day, begun early, leads to health and comfort, and saves no end of trouble and distress later. Constipation is not at all an uncommon trouble even in infants, and is one that needs immediate attention, but attention that is well directed.

CAUSES.—Constipation in breast-fed babies is often caused by the trouble in the mother, or it may be due to the milk not being up to its normal standard.

In bottle-fed babies the chief reason is some error in diet. Usually too little fat is being given, or the milk may be too strong. The mere fact of heating the milk gives it a constipating effect ; thus it will be seen that from the very first artificially-fed babies are liable to this great difficulty.

It is sometimes present in a very obstinate form after an attack of diarrhœa, especially if this has lasted any time. The muscular coat of the bowel has become weakened and its action deficient. Constipation is also common in wasting babies, either from insufficient food being given, or from poor assimilation; in either case, the muscle of the bowel is weakened, and scanty, hard motions result. In rickets, constipation is also a marked symptom, so that if it becomes chronic and troublesome, the mother should always suspect and look out for other signs of this disease.

SYMPTOMS.—The bowels act irregularly, the motions may be very scanty, hard and formed in character, or may be absent for a whole day, or even longer. Accompanying constipation, there is nearly always indigestion, flatulence, or even vomiting ; colic and abdominal pain, with straining, which either produces no motion, or only the passage of

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hard lumps. The child becomes irritable, and often cries, refusing to be pacified.

There are more serious conditions associated with constipation, such as twisting of the bowel, and strangulated hernia, etc., so that it is all important never to neglect this trouble in its earliest stages.

TREATMENT.—In breast-fed babies the mother must do all she can to preserve her general health. Rules and mode of life must be systematic, and the action of her bowels carefully regulated. If she has ill-health, which seems to be the cause, then advice should at once be sought as to the advisability of her continuing to nurse the child.

In dealing directly with this trouble, the easiest and quickest method, that of giving an aperient, should not be followed. This should be the very last resource.

First see that the baby is having sufficient fluid besides its food. Three or four tablespoonfuls of boiled water may be given with great advantage between the bottles.

Alteration in the milk may help. A bottle given once a day regularly for a few days of condensed milk may overcome the trouble; or when the child is older, one of the bottles may be mixed with a patent food.

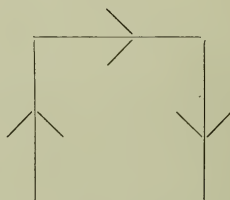
Half to one teaspoonful of olive oil given daily is often successful, and this points to the fact that the food is containing too little fat.

One teaspoonful of honey once a day is also valuable, and is eagerly taken by the child.

Should alteration in the food fail, then careful massage of the abdomen may be useful; ten minutes' daily after the bath should be regularly maintained.

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It is not rubbing that is required, but firm gentle dabs or strokes, \ \, always in the right direction, from the right side below upwards to the margin of the ribs, then straight across the abdomen to the margin of the ribs on the left side, then down the left side as low as possible.



This direction may seem curious to the mother who may know very little of anatomy, but it is necessary for the massage to be over the large bowel, which lies in this position in the abdominal cavity. The contents pass in the direction of the arrows, and massage following these lines strengthens the action of the muscle, and helps the onward movement of the fæces (motion). It may be necessary to resort to some simple aperient; the best is a dose of fluid magnesia, to which sugar has been added, one or two teaspoonfuls given regularly every morning, the dose being gradually decreased. It is often necessary to give extra water between meals with this, as thirst is nearly always increased.

Should the bowels not act regularly, and no motion be passed for twenty-four hours, more active measures must be taken.

Olive Oil Injection.—Take two tablespoonfuls of olive oil, and heat up to 100° F. by standing it in a cup surrounded by hot water. Place this in a small glass

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syringe. Never use a Higginson's syringe for a child under three years of age.

Wrap the child in a warm flannel, and let it lie on the left side, draw the legs upwards, and place a diaper under the buttocks. Oil the syringe nozzle, and then gently introduce it into the anus, without force. Inject very slowly. Withdraw the syringe quickly. Keep the child lying down, and press the buttocks firmly together, to help the injection to be retained. This softens the hard motion, and frequently leads to the passage of a large and satisfactory stool, without pain or straining.

Should this fail, medical advice must at once be sought.

Means that must never be used.—The following cannot be too absolutely condemned. They may produce the desired result, but with after-effects to the child which are dangerous or harmful :—

A Soaped Pencil, which some nurses are fond of using, is perfectly abhorrent, and under no circumstances whatsoever should it be permitted.

A lump of Soap introduced into the bowel is far less dangerous than the former, but must also be absolutely condemned. The irritation of the soap on the mucous membrane of the bowel may lead to inflammation, followed by ulceration and other lasting troubles.

Pure Glycerine injections may never be used, and only under exceptional circumstances should a dilute injection of half a teaspoonful of glycerine to two tablespoonfuls of water be administered.

Castor Oil should not be resorted to habitually, for though it may open the bowels once or twice, it produces worse constipation afterwards.

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6. Prolapse of the Bowel.

One of the bad results both of constipation and diarrhœa is prolapse of the bowel. After a motion, or after straining without the passing of a motion, a red mass varying in size may be found protruding through the opening (anus). Unless the mother has heard of this complication the first sight of it may cause her considerable alarm. It is in no way dangerous in itself unless the prolapse is allowed to remain protruding, or if it frequently recurs.

TREATMENT.—Place the child on its left side. gently and carefully press the mass back, two fingers being well oiled, and the crevices under the nails filled with soap scraped from the cake. After having replaced the bowel, keep the buttocks firmly pressed together for a few minutes. The mere fact of having pushed the mass back often produces a desire to continue straining, which will only tend to repeat the same trouble. For some time the child should be made to pass its motion into a diaper lying down. If not, the prolapse may recur by the strain on the weakened bowel being exerted in the sitting position.

7. Sudden Twisting of the Bowel.

Having mentioned that there is such a thing as a sudden twisting of the bowel (see p. 143), with complete or almost complete stoppage of the motions, it is well to mention the symptoms, so as to enable the mother to lose no time in calling in medical aid.

SYMPTOMS.—Sudden screaming of the child without any apparent cause, followed by vomiting and retching. Strong straining efforts are often made,

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but no motion is passed, and later slime streaked with blood is seen. The legs are drawn up on to the abdomen, or older children roll about on the floor in great pain. The child becomes pale and collapsed, the skin is cold and clammy or covered with beads of perspiration. Then an interval of comparative ease and quiet occurs, only to be followed by another paroxysm of pain and screaming.

TREATMENT.—Send for surgical aid *at once*. Keep the child warm on its bed with blankets and hot bottles. Never give an aperient. Do not give food, only a little drinking water. The little one's life is in danger ; do not delay, but send for help immediately.

8. Umbilical Hernia or Protrusion of the Bowel.

In this a portion of the intestine protrudes under the skin at the umbilicus. It may be present at birth, but comes on more frequently later. It is due to failure of the complete closure of the navel, and is increased by crying, or straining on passing the motions if constipation is present ; also if an effort has to be made on passing water, which is not infrequently the case in a little boy if circumcision is needed.

Preventive Treatment consists in great care of the cord during the first week of the baby's life, ensuring complete healing of the scar, and special attention to the fixing of the binder. If a hernia is present, it may be necessary to strap the sides of the aperture closely together, having first pushed back the intestine. A firm pad placed in the binder may greatly aid in strengthening this weak spot. A most excellent and inexpensive pad, and one which does its work well, is a fairly large flat pickle cork. This should be

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covered in cotton-wool, and placed in a perfectly clean piece of linen, and sewn inside the binder. If carefully adjusted over the navel it forms a most efficient and useful truss.

All other causes of abdominal strain must be attended to, and in the course of a few weeks the trouble will probably be cured. If not, further surgical aid will be required.

9. Sore Red Buttocks.

This is one of baby's troubles which can in most cases be prevented. It should, at any rate, never be allowed to reach a bad stage where the skin becomes broken, with the formation of small ulcers and sores.

CAUSES.—Neglect on the part of the nurse in allowing the child to wear wet napkins, using those which have been wetted and then dried without being washed, or insufficient cleansing of the buttocks after a motion, are all among the simple and frequent causes of reddening of the skin.

The more serious ones are :—Some error in diet giving rise to indigestion, with motions that are irritating and scalding. This may be due to too much sugar, starch, or fat in the food.

Some condition of the urine, which when passed causes scalding. This is again usually due to the food being too concentrated, or to insufficient fluid being given between meals.

TREATMENT.—The preventive treatment includes the utmost care with the napkins, changing the child directly they are damp, and never letting it sleep in used diapers. After a motion has been passed the parts should be sponged with warm water and

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thoroughly dried, a little dusting powder applied, and a perfectly dry, soft, fresh diaper put on.

The treatment when the trouble has actually occurred is to correct or alter the food, and so allay indigestion and promote healthy motions. *Locally*.—Keep the parts as dry as possible, carefully bathe with warm water after every motion, then smear with lanoline, vaseline, or zinc ointment. Later, when the sores have healed, powder the part well with a good dusting powder.

10. Thrush or Sore White Mouth.

This, again, is an early trouble which should not be allowed to occur in healthy babies, though it is not uncommon in delicate or ill-nourished infants.

SIGNS.—The mucous 'membrane, or lining of the mouth, gums and throat, as well as the tongue become covered with small white patches which can be peeled off, leaving red, raw, painful sores. The child is irritable and restless, frequently crying, and refusing to take the bottle or breast because of its sore mouth. Indigestion generally supervenes, and irritating motions are passed which cause red and sore buttocks. This has led to the expression so often heard, "the thrush has gone through the child."

TREATMENT.—*Preventive*.—Absolute cleanliness of the teat and bottle, or in breast-fed babies, the nipple. After every meal the mouth should be carefully washed out with a little piece of soft rag dipped into warm water. This removes any milk that may remain after the feeding, and by this precaution all trouble may be prevented.

Actual Treatment.—After every bottle, the mouth

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must be washed out, and wiped round with another piece of linen dipped in glycerine and borax, or glycerine and chlorate of potash. A little extra care is necessary with the feeding, and it may be advisable to give the child a small dose of some simple medicine for indigestion before food, such as:—

Bicarbonate of soda, 2 or 3 grains.

Rhubarb wine, 5 to 10 drops.

Glycerine or syrup, 10 to 15 drops.

Dill water added up to one teaspoonful.

In ill-nourished children the diet must be carefully reconstructed or altered.

11. Teething or Dentition.

Baby's first teeth are usually cut in the fifth or sixth month. The two lower middle ones (central incisors or cutting teeth) appear first. After this the rest usually come in the following order:—

The four upper central teeth (or incisors) by the end of the first year; next the two lower, side or lateral incisors. The four first double teeth, the two eye teeth between eighteen months and two years, and the four back double teeth in the third year. This completes the first set of milk teeth. It has been said that "Teeth are a trouble to get, a trouble to keep, and a trouble to lose." Dentition is usually more or less a source of some trouble, though in a healthy child it is surprising how little disturbance is caused.

THE SYMPTOMS may be the following, though as just mentioned, in some children they may be absent or very slight:—

Fretfulness without apparent reason, restless nights, sleeplessness with a little feverishness. Attacks of

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indigestion with sickness and flatulence. The motions often altered, with, perhaps, diarrhœa. Slight loss of weight, or at least not the regular gain. Dribbling, with reddening of the lips and skin. Frequent sucking of the fingers, or stuffing of the little fists into the mouth.

TREATMENT.—Extra care of the child, and avoidance of all chills. Careful regulation of the diet, and increased drinks of water all tend to help the little one. The frequent changing into a dry bib will prevent the chapping of the skin under the chin.

Local Treatment.—Gently rub the gums with the little finger, or a smooth ivory ring is often a great comfort to the child if it is allowed to bite on it. This should be attached to the frock to prevent its falling upon the floor. Babies should never be given soothing or teething powders; nearly all contain some harmful sedative. A doctor should be consulted if the child is very poorly when cutting its teeth, and not the window of a chemist's shop.

CARE OF THE TEETH.—Too much care cannot be expended on the teeth, even from the very first. The mouth and teeth should be cleansed after every meal. This will do much to prevent the beginning of decay. Later, as soon as possible, a child should be taught to use a tooth brush, and to thoroughly clean the mouth and teeth at least night and morning, and after the mid-day meal.

12. Convulsions.

CAUSES.—Infantile convulsions may accompany dentition, or may be caused by some improper feeding. Hot weather, troublesome constipation

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and severe colic, or attacks of diarrhœa, and the onset of any acute disease such as pneumonia, measles, scarlet fever, etc., may all be answerable for this complication of childhood.

SYMPTOMS.—The attack, to say the least of it, is frightening to the mother, so it is of great importance to be able to recognise what is happening, and know what to do. It is a comfort to know that convulsions are seldom fatal unless they are of great severity, or due to some serious brain trouble.

The onset is often preceded by twitching of the muscles of the face or fingers, the eyeballs may roll upwards, so that the whites of the eyes are seen. In the fit the child becomes rigid, the head a little thrown back, the arms and legs stretched out and stiffened, the hands clenched over the thumbs, which are bent into the palms. Breathing stops for a moment, and the face which was pale now assumes a bluish colour. Soon the spasm passes off, and breathing returns, the face becomes more normal in colour, the limbs lose their rigidity, and the child being more or less drowsy, not infrequently drops off to sleep, but remains pale for some time afterwards.

TREATMENT.—Quickly undress the child and put it into a hot bath, the temperature being 100° F. Put a cold-water cloth or wet sponge on its head. Keep the child in the bath six or seven minutes, after which dry, and wrap in a warm blanket and put to bed with a hot-water bottle. If the cause is constipation, give a dose of castor oil if possible, or, better still, an olive oil enema. This is a case where an injection of *dilute* glycerine is permissible, half a teaspoonful to two tablespoonfuls of warm water, as

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mentioned. No brandy whatever must be given. A small dose of potassium bromide may be necessary but nothing else should be administered in the way of quieting medicine unless ordered by the doctor. The following is a useful mixture, and should be kept in the "first-aid" cupboard, to be handy in such an emergency :—

Potassium bromide, 2 grains.

Sal volatile, 2 drops.

Syrup and water added up to one teaspoonful.

Buy 1 oz., and have it labelled "For convulsions," and give one teaspoonful in a little water if required.

13. Tongue Tie.

In this trouble the little tongue is fixed down to the floor of the mouth too tightly, by an unusually short attachment. In most cases nothing need be done, for it frequently stretches with use. When, however, sucking is difficult, then the connection should be carefully snipped by the doctor.

14. Enlargement of the Breasts.

A few days after birth, the breasts of the child may become quite enlarged, and are occasionally red and painful to the touch. Fomentations should be applied, but rubbing should not be permitted. With the application of moist heat the trouble soon subsides.

15. Rose Rash or Gum Rash.

This is an unimportant trouble, but frequently causes the mother great anxiety.

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SYMPTOMS.—The face, chest, buttocks, and stomach are covered with a fine red rash, but there is no fever or irritation accompanying the disturbance, and it passes off in a few days.

CAUSES.—Usually some slight derangement of the digestion, or the presence of constipation may give rise to the rash. It frequently makes its appearance when the child is upset with cutting a tooth, hence the name *gum rash*.

TREATMENT.—Careful regulation of the diet, and special attention as to the action of the bowels. A few doses of the rhubarb mixture (see p. 150) before being fed is all that is required.

16. Vaccination.

Owing to the wonderful discovery of Jenner, small-pox is a rare disease, or in cases that do occur, in those who have been vaccinated, it is greatly modified. Children are very susceptible to infection, hence the great importance of early vaccination. This should be carried out in a normal healthy baby at the age of three months, but if the child is weakly, or suffering from any illness, it must be postponed till later.

VACCINATION DRESSING.—Directly after the operation, the doctor puts on a dressing, which should be untouched for two or three days. If, however, this should come off, the place must be covered again with fresh antiseptic gauze, and either fixed with several strips of adhesive plaster, or bound on with a bandage. Great care must be taken not to knock or injure the arm.

LOCAL TROUBLE.—Around the places, the arm becomes more or less red and inflamed, but this

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will be much less marked if the sore is kept well covered with the dressing. Should the arm be very painful it may be cooled with cold-water rags, but these must not be applied over the actual spots.

GENERAL DISTURBANCE.—The child is often fretful, restless, and sleepless. There may be also a little fever, with attacks of indigestion, sickness, and diarrhœa. Convulsions are not unknown, but they are not common. Loss of weight for the week usually results. All these symptoms are aggravated by the arm not being properly covered and treated.

TREATMENT.—This includes general care in feeding, an extra amount of drinking water, no exposure to cold or draughts, and careful regulation of the bowels. In the course of a week or ten days the little one should be over this early trouble. It is well to bear in mind that the greater disturbance associated with vaccination is usually due, not to the actual inoculation, but to neglect, or want of care in protecting the vesicles. Hence the great importance of absolute cleanliness.

17. Croup.

Attacks of croup are liable to occur without any warning and frequently in the middle of the night. The child wakes with symptoms of suffocation and with a peculiar crowing, whistling sound in the throat. It may have been put to bed in apparently good health, though the onset is often heralded by slight fretfulness and restlessness, accompanied by hoarseness of the voice.

SYMPTOMS.—The child wakes suddenly in terror, fighting for its breath, inspiration being accompanied

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by the crowing noise, the face becomes blue and congested, or if the attack lasts longer, pale and livid, and the appearance of suffocation is alarming.

Shortly, however, the symptoms become less severe, and gradually pass off and the child falls to sleep. Another attack may occur the same or following night, or, on the other hand, may never again return.

TREATMENT.—The child should at once be put into a hot bath, 103° F., and a bronchitis kettle, if at hand, started at once, or steam from an ordinary kettle can be directed towards the little patient and will often give great relief. Fomentations to the throat are also advisable, but a doctor should always be sent for in severe cases, for it must be remembered that croup may be a symptom of diphtheria, which needs immediate and careful medical treatment.

18. Chill or Feverish Attack.

One of the most frequent ailments of childhood is the common cold or chill, which, if treated at once, is usually a slight matter. If neglected in the earlier stages, a baby is apt to get feverish and poorly, and the after-effects are more serious.

A fruitful source of colds is coddling and over-warm rooms; or, when a child is short-coated, dressing it in frocks with low necks and short sleeves.

When a baby shows unmistakable signs of cold, with sneezing or running at the eyes and nose, it should be kept in one room, or, if feverish, in bed.

A simple aperient will often assist in clearing up the trouble, and half to one teaspoonful of the sweet spirits of nitre mixture with a little water given every

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four hours is a good remedy, and will usually bring down the temperature.

It is important to keep the child in a warm, well-ventilated room. Should there be slight cough or some wheeziness in the chest, which is not uncommon, a good rub at bed-time with liniment will help to relieve any tightness in the breathing.

In a bottle-fed baby, it may be well to mix the food a little weaker than usual. The child is nearly always thirsty, and a larger quantity of less concentrated food helps to allay this. Additional drinking water at frequent intervals should also be allowed.

If in the course of a day or two with these simple remedies the baby does not seem to improve, then no further time should be lost. The doctor must be called in, for the feverish cold may be the beginning of an attack of measles, bronchitis, or some other more serious trouble.

19. Earache.

This trouble is not an uncommon accompaniment of a cold or chill. The inflammation of the lining membrane of the nose and back of the throat extends up into one of the ear passages known as the Eustachian tubes, and produces pain or earache.

The Eustachian tube is a delicate little channel on either side, which communicates with the middle ear and the throat; it is by this that the pressure in the ear is maintained at the same level as that of the outside air. When this tube is partially or completely blocked a singing or buzzing noise is experienced, and unless relieved, pain ensues, and the child becomes very fretful and restless.

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A child who is suffering from earache perpetually shakes its little head, and seems unable to rest quietly. The hands are raised and put over, or as near to, the aching spot as possible.

The cutting of a tooth is not infrequently accompanied by pain in the ear of varying intensity.

This trouble is associated with more dangerous conditions which need expert surgical advice, so that a case, in which the pain is prolonged and of increasing severity, should never be overlooked or neglected.

TREATMENT.—*General*.—Care in the diet and special attention in keeping the bowels well open is all that can be done generally, but *locally*, warm oil poured into the ear is a safe remedy, or a hot fomentation applied behind the ear may give relief; a warm flannel, with a hot bran-bag tied over the ear, is often comforting.

CHAPTER VIII.

FIRST-AID IN THE NURSERY AND THE TREATMENT OF EMERGENCIES.

- i. *Accidents.*
 1. BRUISES. a. Lock-jaw or Tetanus.
 2. CUTS. a. Hæmorrhage.
 - ii. *Burns and Scalds.*
 1. SHOCK. a. Signs.
b. Treatment.
 - iii. *Sprains and Dislocations.*
 - iv. *Fractures.*
 - SIGNS. a. Deformity.
b. Pain.
c. Loss of use.
 - v. *Foreign Bodies in the Throat, Nose, Eye, and Ear.*
 1. IN THE THROAT.
 2. IN THE NOSE.
 3. IN THE EYE. a. Dust and grit.
b. Lime.
 4. IN THE EAR. a. Hard objects.
b. Insects.
 - vi. *Stings, Scratches, and Bites.*
 1. STINGS. a. Insects.
b. Jelly fish.
 2. SCRATCHES.
 3. BITES. a. Dog.
 - vii. *Nose Bleeding (Epistaxis).*
 - viii. *Apparent Drowning.*
 1. ARTIFICIAL RESPIRATION.

MEDICINE CHEST AND FIRST-AID CUPBOARD.

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CHAPTER VIII.

First-aid in the Nursery and the Treatment of Emergencies.

“Calmness is great advantage.”—*G. Herbert.*

ACCIDENTS are common amongst children and may be serious enough to require the doctor; on the other hand, many only need motherly care, and it is a good thing for her to know how to deal with these emergencies at once.

A mother and nurse should be able to treat intelligently the following conditions:—

- I. ACCIDENTS, BRUISES, AND CUTS.
- II. BURNS AND SCALDS, WITH SHOCK.
- III. SPRAINS AND DISLOCATIONS.
- IV. FRACTURES.
- V. FOREIGN BODIES IN THE THROAT, NOSE, EYE, AND EAR.
- VI. STINGS, SCRATCHES, AND BITES.
- VII. NOSE BLEEDING, OR EPISTAXIS.
- VIII. DROWNING AND ARTIFICIAL RESPIRATION.

1. Bruises and Cuts.

I. BRUISES.—Bruises from falls and blows when the skin is not broken or cut, require little or no treatment. The dark colour which appears after a blow is due to some escape of blood under the skin. In the course of a few days this changes its tint,

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varying from purple to green and yellow, then gradually dies away.

TREATMENT.—If painful, a cold-water rag or water mixed with methylated spirit placed over the bruise with a bandage gives relief.

If the skin is broken, all dust should be washed out with carbolic lotion (1 in 60); or if the dirt should be deeply engrained, boracic fomentations covered with oil-silk, and kept on all night, will often prevent suppuration and pain.

It is of the utmost importance to remove all soil and dust out of a graze or cut, for the micro-organisms which are the cause of lock-jaw or tetanus inhabit both of these. Wounds produced by falls on roads, kicks from the hoofs of horses or ponies, bites of dogs, and scratches of a cat's dusty paw may all be the means of introducing these germs.

Symptoms of Tetanus.—Nothing is noticed until the tenth to about the thirteenth day. The scratch does not properly heal, and looks a little unhealthy, but often not enough to excite suspicion; then about the tenth day the child complains of stiffness in opening the mouth, and difficulty in turning the head, the muscles of both being somewhat rigid. Aid should be immediately summoned. When once the symptoms have declared themselves very little can be done for the child, although the anti-tetanic serum has been successful in a few cases.

2. CUTS.—These may vary from the slightest to the most dangerous. All should be carefully freed from dirt and grit. If the cut is slight, then it should be covered with antiseptic gauze wrung out in boracic lotion, and bound firmly in position.

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Hæmorrhage.—If the bleeding is profuse, pressure should be applied on the bleeding spot by a firm pad, such as a clean, folded pocket-handkerchief. This must be tied on with a bandage, and the limb kept quiet. Later it should be dressed with antiseptic gauze. Should the bleeding continue, a doctor must be summoned without delay. Pressure in these cases may have to be kept up by the fingers until aid arrives; it is often a great help in maintaining this position to tie the fingers to the place, as keeping up pressure for long is both difficult and tiring.

2. Burns and Scalds.

A burn is produced by fire or dry heat in any form, and a scald by hot water or steam.

The chief danger after both is “shock.” The pain produced, followed by fright, and shock to the whole system, are sufficient in some cases to cause death.

BURNS.—If the clothing of a child catches fire, it should immediately be thrown down on the floor and wrapped up in a hearth-rug, blanket, or tablecloth to extinguish the flames. A doctor must be sent for at once, and if the shock is severe nothing should be done to the actual burn, and no attempt made even to undress the child until he comes. It should be put to bed with hot bottles, given a drink of hot milk, or a teaspoonful of brandy in hot water, and kept perfectly quiet. *Shock is the first danger*; and this can often be overcome by warmth, quiet, and stimulants.

After this has passed off then the burn should be dressed. The burnt clothes must be removed if this

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has been impossible before ; all that may be sticking to the skin should be carefully cut away. Then the burnt part should be soaked in Carron oil (see p. 179); if this is not handy, a rag thickly spread with vaseline, lanoline, cold cream or soaked in olive oil will do. This should be left on for some hours. Then it must be removed, and the burn bathed with boracic lotion. All blisters should be pricked with a clean needle and the fluid let out. Later the wound should be dressed with boracic ointment, or boracic and eucalyptus ointment spread on lint, and covered with cotton-wool and a bandage.

The same treatment should be followed in scalds. Slight burns, with only reddening of the skin, should be covered either with some grease or flour, and bound up in cotton-wool and a bandage. The object of either of these remedies is to exclude the air from the injured skin ; this in itself allays much of the pain, and smarting sensation.

SIGNS OF SHOCK.—The child becomes faint or unconscious, the face white, and the lips livid. The skin feels cold and clammy, and is covered with beads of perspiration. The pulse is feeble or almost imperceptible. The breathing slow and shallow in character. The condition is one of great danger, and the child may die without even regaining consciousness.

The Treatment may be summed up in four words, viz. :—warmth, quiet, stimulants, and nourishment.

3. Sprains and Dislocations.

I. SPRAINS.—The commonest forms of sprain in children are those associated with the ankle and wrist.

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They are produced by a sudden twisting of the foot or hand, the ligaments becoming over-stretched and injured. Rest is necessary; soaking the joint at once in hot water for some time gives great relief; cold-water rags frequently changed are also soothing. If there is much deformity, it is advisable to call in medical aid at once in case there may be more than a simple sprain, as either a fracture or dislocation may have occurred.

2. DISLOCATIONS.—Happily these are rare in children, but the more usual are those which occur at the elbow or shoulder, and are often produced by the dragging or swinging of the child by the arms. This trick, which is amusing to the little one, ought never to be allowed, as it is not unattended by risk, and if the dislocation takes place a permanent weakening of the joint may result.

4. Fractures.

If an accident occurs and a fracture or broken limb is suspected, medical aid must be called at once. The limb should be supported until help arrives, and the child kept quiet.

THE SIGNS OF A FRACTURE may be looked for, but no examination entailing handling or movement of the limb must be permitted.

(a) *Deformity*.—This may be well marked or only slight, according to the variety and location of the injury. In a green stick fracture, which occurs in children where the bone is not snapped right across, the deformity is shown by an unnatural bending of the bone.

(b) *Pain* is present in the limb, is usually worse

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just over the fracture, and is increased by being touched or handled.

(c) *Loss of Use*.—The limb lies not only in an unnatural position, but it usually cannot be moved or raised.

TREATMENT.—Surgical assistance should be immediately sought. Fractures generally do very well, the bones heal quickly and no deformity results. Occasionally there is trouble when the fracture is very near the joint; the growing end of the bone may have been separated from the shaft and then fails to unite, and there is permanent loss of use in the limb and it remains stunted in growth.

5. Foreign Bodies in the Throat, Nose, Eye, and Ear.

I. FOREIGN BODIES IN THE THROAT.—Not infrequently babies swallow buttons, coins, pins, fruit stones, bits of coal, etc. In many cases they are safely swallowed, but in others they become fixed in the air passage.

The child chokes, fights for its breath, and becomes livid in the face, and unless relief is at once obtained dies from suffocation.

TREATMENT.—This must be rapid. Hold the child upside down by its feet and firmly pat the back; this may be enough to dislodge the object that is fixed. If not, put the finger into the mouth and down into the throat as far as possible, and try and loosen or hook up the article swallowed.

If the coin, or whatever it is, has lodged in the throat and yet the child is able to breathe when lying quietly, send for assistance at once, keeping it perfectly still meanwhile. Absolute firmness on the

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part of the mother to prevent any excitement or emotion in others which might disturb the child, is the only way of avoiding a fatal termination to the accident.

In many cases, however, the article is swallowed without lodging in the air passages, and passed into the stomach. The aim now should be to get rid of it without injury to the bowel, so that the best treatment is to give a diet which will bury the button or coin in itself. Never give an emetic or an aperient, but plenty of stodgy food, such as bread and butter, bread and milk, porridge, potatoes, suet pudding, etc. The motions must be carefully searched for two or three days for the swallowed object. This is best done by mixing them freely with water and passing all through muslin or a sieve. If it is found, well and good ; if not, the child should be X-rayed, and should the foreign body be located, an operation may be performed with every hope of success.

2. FOREIGN BODIES IN THE NOSE.—Beads, peas, and other small round objects are not infrequently sniffed up the nose. They should never be searched for with pointed instruments, but the child, if old enough, should be told to blow down the nose as strongly as possible ; a pinch of snuff to encourage sneezing has been recommended, or pepper, which is more likely to be at hand. If neither of these has any result the child should be taken to the doctor. Occasionally children forget that they have put anything up the nose, or perhaps are frightened to mention it. The only way that suspicion is aroused is the onset and persistence of an offensive discharge. A careful professional

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examination will then reveal the real cause of the trouble.

3. FOREIGN BODIES IN THE EYE.—The eye is such a delicate and precious organ that only the very slightest trouble should be dealt with at home; for any of the more serious conditions medical advice should be sought.

Dust in the Eye often gets lodged under the upper lid; it is therefore most important to know how to turn the eyelid inside out. This is quite painless, and the particle of dust or grit can be seen as a black speck and easily removed with the twisted corner of a clean handkerchief. Make the child look down, then lay the rounded end of a pen-holder or bone knitting needle across the outside of the top eyelid. Take hold of the eyelash and edge of the lid and turn it up; it will turn inside out over the pen-holder, or, if this is not used, the tips of the fingers are quite enough. A drop or two of castor oil put into the eye afterwards often gives great relief; if the lid is at all inflamed an eye-shade is to be recommended.

If *Lime* should blow into the eye, then instead of castor oil, water mixed with vinegar in equal parts is the best remedy.

Should anything get fixed into the front, glassy part of the eye, nothing should be done until the doctor comes.

4. FOREIGN BODIES IN THE EARS.—Beads, peas, boot-buttons, etc., are sometimes deliberately stuffed into the ears. Careful syringing may be tried if carried out by someone who really understands how it should be done. If the object is a pea, water should never be used, for if the syringing proves to

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be unsuccessful in removing the seed, it swells by being moistened and the pain is only increased. No sharp instrument must be employed, as misdirected application may produce permanent injury and deafness.

If a fly, earwig, or other insect gets into the ear, warm oil, or even paraffin, should be poured in, and the child's fears calmed. The insect will soon float to the top ; and can then be easily removed.

6. Stings, Scratches, and Bites.

I. STINGS.—Stinging of a bee or wasp is of frequent occurrence. Care should always be taken



FIG. 25.—Surgical Forceps.

to examine the place thoroughly, for the sting, or part of it, is often left in and must be removed. This can be seen by the naked eye, though a reading or magnifying glass may help in locating it. If present it should be pinched out with a pair of forceps (Fig. 25), after which the blue-bag, ammonia, or sal volatile may be rubbed into the wound. The juice of a freshly-pulled onion is also an efficient, though homely, cure. If these remedies are not at hand, washing-soda dissolved in water will do equally well. In some cases faintness, sickness, or collapse may supervene. The child should then be put to bed, and kept warm with blankets and hot-water bottles ;

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it need not be undressed until the symptoms have passed off, if they are at all urgent. A drink of hot milk is often a great help.

Jelly-fish Stings are not uncommon when a child is paddling or running about barefoot on the sands. The sting is often severe, and the skin for a wide area becomes red and mottled, with a burning and pricking sensation. Soak a piece of rag in a solution of soda or ammonia and keep it wet, and well over the part. The relief is great, and usually in a few hours the irritation will have passed off altogether.

2. **SCRATCHES AND BITES.**—These are common when cats and dogs are kept in the house. Wounds of this kind should never be neglected, as they are very liable to become septic. They should be washed with carbolic (1 in 60), and covered with antiseptic gauze. If the dog-bite is at all deep or large it is far wiser to send for the doctor. If there is any fear of the health of the dog it should not be killed, but watched, and if signs of rabies should appear, which disease is very rare in this country, the child should be inoculated at once.

7. **Nose Bleeding (Epistaxis).**

This is not an uncommon occurrence in childhood, and in most cases does not require much treatment. If the bleeding is not excessive or prolonged it need not be regarded with any anxiety. Should it become, however, profuse, a cold sponge on the back of the neck, or the old-fashioned remedy of a key down the spine may be efficient.

It is not advisable to let the head be thrown far

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back, for though this appears to check the hæmorrhage, the blood only passes unseen down the throat instead of coming through the nose.

If the bleeding is obstinate, a doctor should be called, as a considerable loss of blood cannot be lightly regarded where a child is concerned.

The trouble may be due to a blow, or a fall, or may, on the other hand, come on suddenly without apparent warning. It frequently precedes or accompanies the onset of one of the acute feverish illnesses.

8. Recovery from Apparent Drowning.

Children, as long as they are children, will never cease to love playing with water. A pond or running stream seems to have an irresistible attraction for them, and if a child can escape surveillance it will almost certainly be found in the vicinity of this much-loved element.

Stooping over the water, the chances are very much in favour of the little one tumbling in. If the pond is shallow the child will probably escape with no worse results than a fright and a wetting; but, on the other hand, if there is any depth of water or a running current, the risk of drowning is grave, and immediate remedies must be applied the instant rescue is effected.

Should the face be covered with mud and weeds, the throat, mouth, and nose must be speedily cleared, the tongue pulled forward, and if the child is small enough, it should be lifted up by the feet, so as to let the water run out of the throat.

If the child is unconscious a doctor should at once be summoned; but without awaiting his arrival, the

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clothing must be opened and loosened, but no time must be wasted in its actual removal. It is all-important that artificial respiration (as described below) should be begun as quickly as possible, for every second is of value. When signs of recovery are seen, a blanket should be wrapped round the child, and if there is someone to help, the clothes may now be slipped off as long as artificial respiration is not interrupted. Hot bottles should be placed round the little patient, and the limbs rubbed upwards. Later a drink of warm milk must be given, and when breathing is normal and the child conscious, it may be allowed to sleep, but must be watched for some hours.

The following is Schäfer's method for restoring animation in the apparently drowned :—

Immediately after removal from the water loosen clothing round neck and body, and lay the patient face downwards with the arms stretched out in front of the head, and the face turned to the side. Kneel astride or alongside the patient.

Place the hands over the patient's lowest ribs, one on each side, with the thumbs parallel, nearly touching.

Bend forward with the arms straight so as to allow the weight of the operator's body *gradually* to fall on the wrists, and thus make a steady, firm, inward pressure on the lower part of the back of the chest. (This part of the operation should occupy the time necessary to count—slowly—*one, two, three.*)

Immediately after making the downward pressure, swing the body backwards so as to relax the pressure, but without lifting the hands from the patient's body.

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(This part of the operation should occupy the time necessary to count—slowly—*one, two.*)

Repeat the forward and backward movements (that is, the pressure and the relaxation of pressure) without any marked pause between the movements. The downward pressure forces the air out of the lungs and the relaxation of pressure causes the air to be drawn in again.

The tendency of the inexperienced is to press on the pelvis and not on the ribs; this must be avoided.

Other common errors are the use of insufficient force, pressure too near the mid-line of the back, and the removal of the hands at each relaxation of pressure.

Continue the movements at the rate of about twelve per minute until natural respiration has recommenced.

When natural respiration is fairly resumed, cease the artificial movements. Watch the patient closely, and, if respiration ceases, repeat the pressure and relaxation of pressure as before.

When natural respiration has commenced, the patient should be allowed to lie in an easy position on the right side, and treatment for the promotion of warmth and circulation may be proceeded with.

After breathing is restored, the wet clothing may be removed and a dry covering substituted. This must be done without disturbing the patient, who should be allowed to lie still and be watched for at least an hour and encouraged to sleep.

The movements of artificial respiration are of the first consequence. If the operator is single-handed he must attend to these alone until natural breathing is restored. If other assistance is at hand, warm

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wrung-out flannels, hot bottles, etc., may be applied between the thighs, under the arm-pits and between the legs; but the movements of artificial respiration must not be interfered with.

HOUSEHOLD CUPBOARD FOR FIRST-AID.

- Clinical thermometer (Fig. 26).
- Bandages, 1 to 3 inches wide.
- Absorbent cotton-wool, in packet.
- Antiseptic gauze, in packet.
- Boracic lint (pink).
- Plain lint (white).

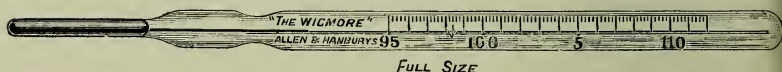


FIG. 26.—Clinical Thermometer.

- Oil silk, oil paper, or jaconette.
- Finger stalls.
- Eyeshades, single and double.
- Old soft white rag.
- Safety pins.
- Sticking plaster.
- Boracic powder.
- Boracic acid crystals.
- Boracic ointment.
- Lanoline.
- Vaseline.
- A good liniment or embrocation.
- Bottle of lead lotion (for sprains).
- Carron oil (for burns or scalds).
- Linseed meal for poultices.

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Carbolic acid (1 in 20), to be diluted with hot water to 1 in 60 (marked "Poison").

Boracic lotion. Better kept in the crystals, and made freshly as required.

Small tin of mustard.

Scissors (Fig. 27).

Forceps.

Glass syringe, 2 oz.



FIG. 27.—Scissors.

Medicine glasses (graduated) (Fig. 5, p. 29).

Indiarubber hot-water bottle.

Castor oil.

Liquorice powder.

Cascara tablets.

Olive oil.

Sal volatile.

Ipecacuanha wine.

Sweet spirits of nitre.

Brandy.

Smelling salts.

HOUSEHOLD MEASURES.

1 minim = 1 drop.

60 minims or drops = 1 teaspoonful or 1 drachm.

2 teaspoonfuls = 1 dessertspoonful or 2 drachms.

4 teaspoonfuls or 2 dessertspoonfuls = 1 table-spoonful or half an ounce.

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8 teaspoonfuls or 8 drachms = 2 tablespoonfuls or
1 oz.

10 oz. = half a pint, or a tumblerful or breakfastcupful.

20 oz. = 1 pint.

Prescriptions.

The following prescriptions, with their simple directions, may be a help to the mother.

Lotions.

BORACIC LOTION OR BORACIC ACID LOTION.—This is made by dissolving a teaspoonful of boracic acid crystals in 1 pint of boiling water. The boracic powder will do equally well, but it is much more difficult to dissolve. Much smaller quantities may be mixed if desired, and it is well to remember that a freshly-prepared lotion is far better than one that has been made some time.

Uses.—It may be used as a mild antiseptic lotion in cases of cuts, bruises and injuries, also for the bathing of burns and scalds in their later treatment. It is the best and safest lotion for the eyes, and gives great relief if used frequently, for any irritation that may be present in the eyes or eyelids.

Boracic lint is used for hot fomentations. This is specially prepared by, and procurable from, all chemists and druggists.

When a fomentation is applied it must be put on as hot as possible. The boracic lint should be soaked by pouring boiling water upon it, then squeezed almost dry by wringing it in a clean cloth, or the corner of

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a towel. Then it is put on to the injured part very hot, and rapidly covered with a piece of oil-paper or oil-silk to prevent evaporation. A piece of cotton-wool should be placed over this to keep in the heat, and kept in position with a bandage.

Boracic acid tablets can be bought ready for use. One of these should be dissolved in 2 oz. of warm water, and the solution can then be used as required. This is a handy but more expensive way of procuring the lotion. A similar solution of boracic acid may be made in which to keep baby's bottles and teats, but these should all be carefully rinsed out before use.

CARBOLIC ACID LOTION.—A bottle of carbolic acid of strength 1 in 20 should be bought from the chemist, and then when required for use it can easily be diluted to the necessary strength of 1 in 40 by adding an equal amount of hot water, or 1 in 60 by adding twice as much water. This is a safer way, for the pure carbolic acid, which is of an oily consistency, is apt to produce nasty burns on the fingers, without careful handling, besides being difficult to dissolve unless mixed with actually boiling water.

Uses.—This lotion is much more strongly antiseptic in its action than boracic, and very useful in the treatment of wounds, such as grazes and cuts, especially when dust and gravel have complicated the sore.

NOTE.—This lotion, however weak, *must never* be used for the eyes.

Carbolic is also useful in cases of bad toothache. A little bit of cotton-wool soaked in the strong solution and squeezed fairly dry should be put into the decayed tooth, and covered with another dry piece of

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wool. This often gives immediate relief, and will stop the pain for the night or until the child can be taken to the dentist.

One little precaution must be taken in doing this, which is, that the cotton-wool must not be soaked to such an extent as to drip on to the lips or tongue; if this occurs, a burning sensation is experienced, which may leave a nasty white burnt patch in the mouth.

The taste of carbolic is not at all unpleasant when dilute, being warm and sweet.

LEAD LOTION.—Lead lotion is an excellent remedy for all forms of sprains. It must be applied to the injured part by soaking a piece of lint or white rag in the lotion and fixing it to the place by a few turns of a bandage. The object is to let the lotion evaporate as quickly as possible, and so to keep the limb or joint cool. Therefore, no oil-silk or guttapercha should ever be put over it, as this keeps in the moisture, instead of letting it escape. As soon as the lint becomes dry it should be re-dipped in the lotion and again applied until relief is obtained. As the skin in a sprain is not usually broken, there is no reason why the same piece of lint should not be used several times.

LINIMENTS.—A very good embrocation is made by mixing 1 part of turpentine and acetic acid liniment with 2 parts of soap and methylated spirit liniment. This may be used for rubbing the chest and back when the breathing becomes wheezy, for muscular stiffness, or for a sprain after the pain has subsided. The bottle should be thoroughly shaken before being used, as the two ingredients readily separate from each other.

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Another useful application is Elliman's well-known preparation.

In using any liniment for a baby or young child, great care must be exercised never to blister the skin. Should there be any fear of this, it is a good plan to sprinkle a few drops of the embrocation on a piece of flannel, and to lay it on the chest and back in this form.

CARRON OIL.—This is a valuable remedy for burns, and ought to be applied at once all over the injured surface by saturating a clean piece of lint in the oil, laying it over the sore, and fixing it by a bandage. This preparation is easily made by mixing an equal amount of lime-water and linseed oil together, and well shaking the bottle before use. It keeps for any length of time. One point must be remembered in using lint for any injury; it is a very simple one, but if observed saves the little patient much pain and discomfort. The *smooth side* of the lint must always be put next to the skin and *never* the fluffy surface.

Ointments.

BORACIC OINTMENT.—This is a useful and safe remedy for applying to all sore or raw surfaces; it should be spread thinly on to the smooth side of a piece of lint and laid over the injury. It is soothing, and mildly antiseptic.

BORACIC OINTMENT MIXED WITH EUCALYPTUS OIL is an excellent dressing for the sores produced after a burn, or when the blister following a scald has been snipped and the dead white skin carefully and painlessly cut away. This ointment should be spread on lint, and changed twice a day.

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ZINC OINTMENT is a valuable addition to the first-aid cupboard. It may be used instead of boracic ointment, should this produce any irritation or smarting; also in cases of sore red buttocks, or chafing of the innerside of the thighs caused by wet napkins or scalding unhealthy motions.

DUSTING POWDERS.—The following is a very good dusting powder, and may be readily obtained from a druggist :—

1 part of zinc oxide.

2 parts of boracic acid powder.

3 parts of starch.

Scented slightly with violets.

This powder is valuable whenever there is any reddening or chafing of the skin, especially of the legs and buttocks.

A more simple dusting powder may be used for ordinary purposes, such as after a bath or after changing the diapers.

MIXTURES.—The four following mixtures are serviceable in different conditions, and can be easily made up at the chemist's, as required :—

A teaspoonful of any of these in water, for a child of one year, and half the quantity for a baby of six months or less, may be given.

1. *For Indigestion.*

R̄. Powdered rhubarb, $1\frac{1}{2}$ grains.

Heavy carbonate of magnesia, $1\frac{1}{2}$ grains.

Aromatic ammonia water, 2 drops.

Syrup, 10 drops.

Anise or dill water added up to 1 teaspoonful.

2 oz. may be ordered.

Directions.—One teaspoonful in an equal amount

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of water to be given three times a day before food.

This mixture cannot be kept longer than a week or two, especially in hot weather.

2. *For a Cough.*

R̄. Ipecacuanha wine, 3 drops.

Vinegar of squills, 3 drops.

Carbonate of ammonia, 1 grain.

Glycerine, 6 drops.

Anise water added to make 1 teaspoonful.

2 oz. may be ordered.

Directions.—One teaspoonful in an equal amount of water to be given every four hours.

This medicine should not be kept from one winter to another.

3. *For a Feverish Attack or Cold.*

R̄. Sweet spirits of nitre mixture (p. 156).

Acetate of ammonia water, 15 drops.

Sweet spirits of nitre, 5 drops.

Aromatic ammonia water, 3 drops.

Syrup, 15 drops.

Water added to make 1 teaspoonful.

Directions.—One teaspoonful to be given in an equal amount of water every four hours.

If carefully stoppered this mixture will keep good for months.

4. *For Convulsions.*

R̄. Potassium bromide, 2 grains.

Sal volatile, 2 drops.

Syrup, 15 drops.

Water added up to 1 teaspoonful.

Directions.—To be given directly after a convulsion

Mother and Baby.

or an attack of muscular twitching, and repeated once in two hours if necessary.

This mixture will keep in good condition for weeks.

CASTOR OIL.—This should be used at the onset of an attack of diarrhœa, but never for *chronic* constipation. It is also efficacious if the child is suffering from acute indigestion caused by some error in the food.

DOSE.—One teaspoonful for a child of a year old. Half a teaspoonful for a baby of six months and over.

OLIVE OIL.—This is of special use in cases of troublesome constipation. Half to one teaspoonful should be given at night.

SYRUP OF SENNA.—For a child that suffers from constipation in spite of all careful regulation of the diet, a small dose of syrup of senna given every night in gradually decreasing doses often cures the trouble.

The size of the dose must be regulated by the amount necessary to produce a normal motion ; half to one teaspoonful every night is the more usual quantity. The great point to remember in giving a laxative is that it must be given regularly every night for some time, and always in decreasing doses. Much harm is done by erratic administration of purgatives, for this only tends to increase the constipation instead of giving relief.

DILL WATER.—Two teaspoonfuls to a tablespoonful may be given before or with the food when there is flatulence or indigestion.

LIME WATER.—One teaspoonful added to the food is advantageous when the baby is suffering from indigestion, with unhealthy and offensive loose motions.

First-aid in the Nursery.

Precautions.

All the bottles should be carefully labelled, placed in a medicine cupboard fixed high up on a wall, but in an easily accessible position. The cupboard door must always be locked, the key removed, labelled, but kept at hand.

These common-sense precautions will prevent all accidents, such as the possibility of the child playing with poisons or drinking the contents of a liniment bottle, or the mother or other persons hurriedly taking the wrong mixture from the shelf.

A medicine cupboard containing everything that can be needed, but which lacks labels and directions on the bottles and pots, is worse than useless, and becomes only a source of danger instead of being a valuable addition to the home.

Only the more common emergencies have been included in this chapter, for dealing with dangerous accidents and severe illnesses is hardly within the scope of the mother or the nurse. The successful treatment of these requires the knowledge and skill of a doctor. It will, however, well repay the mother to make a thorough study of the more simple ailments of children, together with their signs, symptoms, and treatment.

Conclusion.

Motherhood is the highest and noblest privilege to which a woman can be called. No amount of care and trouble that she can expend in fitting herself and her home for the coming responsibility, can ever be thought wasted time or not worth the doing. The mother's very best must be devoted to

Mother and Baby.

preparing herself both physically and morally for this great event of her life. If only the influence and power of a good mother over her child could be more fully understood, and the far-reaching results foreseen, more self-sacrifice and self-control would be willingly devoted by her to the needs of the little one.

Upon this sacred relationship rests to a very large extent the good of our nation ; and the future destiny of our land lies, under God's blessing, with the young mothers of our people.

“The ideal which the Wife and Mother makes for herself, the manner in which she understands duty and life, contain the fate of the community. Her love becomes the animating principle that fashions the future of all belonging to her. Woman is the salvation or destruction of the Family. She carries its destinies in the folds of her mantle.”—*Amiel*.

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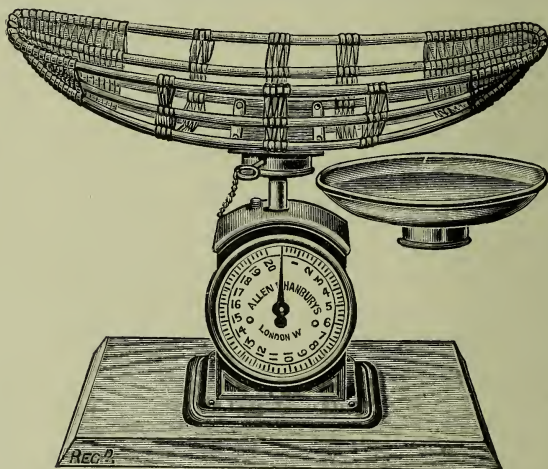
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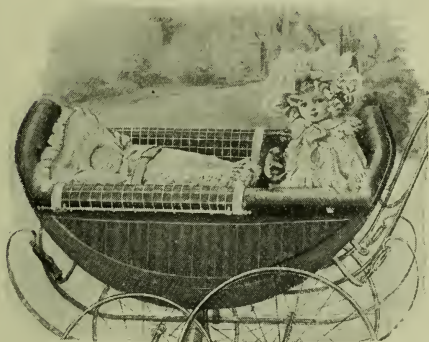
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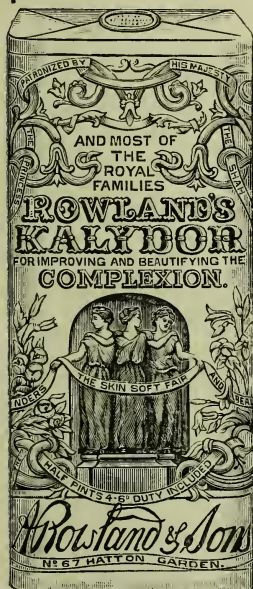
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